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New perspectives on gender based violence: From research to intervention, volume II

Edited by
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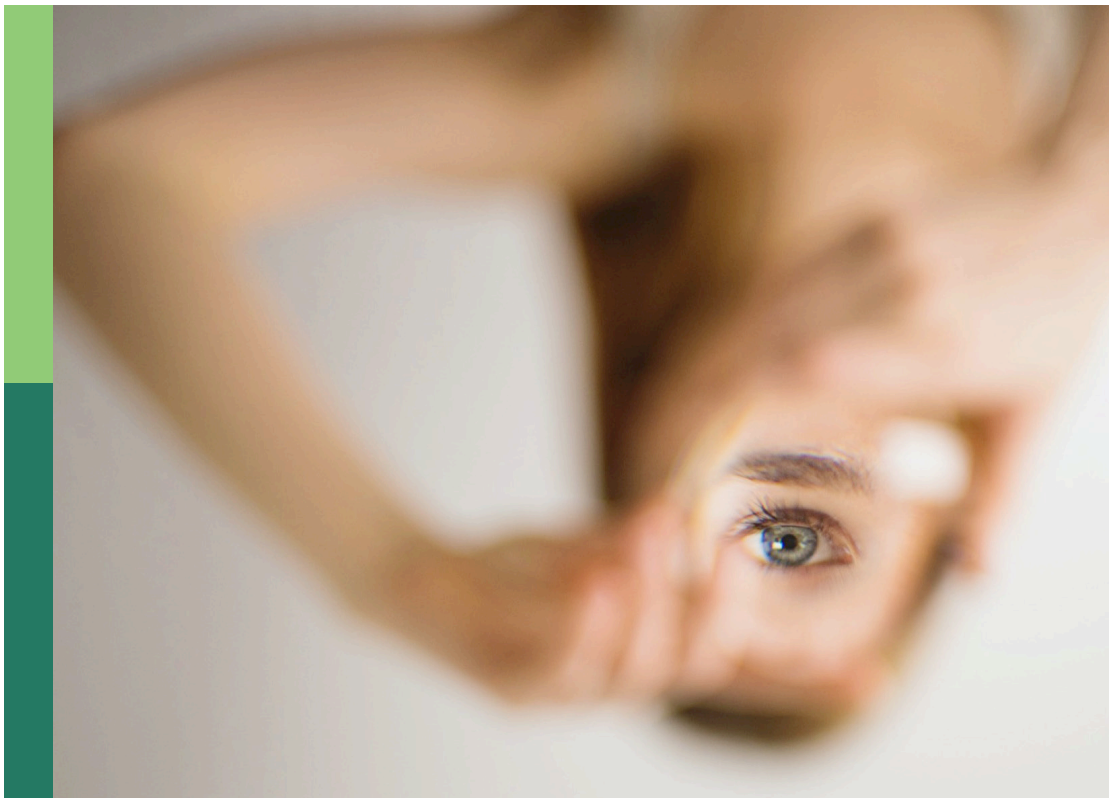

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New perspectives on gender based violence: From research to intervention, volume II

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Psychophysical Impact of COVID-19 Pandemic and Same-Sex Couples' Conflict: The Mediating Effect of Internalized Sexual Stigma

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Research on the effects of the COVID-19 pandemic on same-sex relationships is limited. The present study aimed at analyzing the association between the psychophysical impact of the COVID-19 pandemic and same-sex couples' conflict, also considering the potential mediating effect of internalized sexual stigma (ISS). For this purpose, psychophysical challenges and couples' conflict during the COVID-19 pandemic, ISS, age, biological sex, sexual orientation, relationship duration, religiosity, involvement in lesbian, gay, and bisexual (LGB) associations, sexual satisfaction, and interpersonal partner violence were assessed in an Italian sample of 232 LGB people engaged in a same-sex relationship (aged 18–45 years; M_{age} = 28.68, SD = 6.91). The results indicated that the psychophysical impact of the COVID-19 pandemic was significantly associated with couples' conflict, and ISS mediated this relationship. Among the covariates considered, only sexual satisfaction was associated with couples' conflict. The findings suggest that ISS, over and above the adverse effects of the COVID-19 pandemic on psychophysical health, triggered conflict within same-sex relationships. Studying the role of ISS in various relational and social contexts is important, as ISS may have an adverse effect on the mental health of sexual minority people. We recommend that more efforts be made to improve research on the LGB population during the public health response to the COVID-19 emergency, because the paucity of studies underlines the invisibility of this population in many domains, including the domain of romantic relationships. Implications and directions for future research are discussed.

Keywords: couples' conflict, health, internalized sexual stigma, sexual minorities, COVID-19

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INTRODUCTION

The COVID-19 pandemic has seriously affected the mental health of the global population, and had a particularly negative impact on sexual minority people (Cahill et al., 2020; Salerno et al., 2020a,b) by, among other reasons, decreasing the quality of same-sex relationships (Li and Samp, 2021a). Previous research has shown that individuals involved in same-sex relationships are more likely to experience poor mental health and psychophysical harm during the COVID-19 pandemic compared to individuals in opposite-sex relationships (Li and Samp, 2021a), due to specific minority stressors (Meyer, 2003; Herek and McLemore, 2013). For instance, high levels of internalized sexual stigma (ISS), health disparities, reduced social support, social inequalities,

and discrimination in accessing emergency government services have contributed to relationship dissatisfaction and conflict in this population during the emergency period (Gruberg, 2020; Salerno et al., 2020a; Li and Samp, 2021a). On this basis, drawing on a sample of lesbian, gay, and bisexual (LGB) Italian people, the present study aimed at: (a) examining the level of same-sex couples' conflict during the Italian diffusion of COVID-19 and investigating the relationship between conflict and psychophysical impact of COVID-19 pandemic within these relationships; and (b) investigating the role of ISS—the most insidious subjective proximal minority stressor for sexual minority people—on the relationship between the psychophysical impact of the COVID-19 pandemic and same-sex couples' conflict, after controlling for some individual (i.e., age, biological sex, sexual orientation) and contextual factors (i.e., religiosity, involvement in LGB associations, sexual satisfaction).

Studies focusing on same-sex couples' conflict have shown that sexual minority people report comparable (Solomon et al., 2005) or lower (Gottman, 1994; Kurdek, 2004; Balsam et al., 2008) levels of conflict management compared to individuals in opposite-sex relationships. For instance, Solomon et al. (2005) found that married opposite-sex couples across the United States did not report more conflict about housework, money, or communication styles than same-sex couples (both female and male), despite discrepancies in the division of housework, finances, and relationship maintenance behaviors. The authors, in line with a previous study (LaSala, 2004), found that the area of conflict in which opposite-sex and same-sex couples most differed pertained to sex outside of the relationship, whereby sexual minority males were significantly more likely to experience conflict about non-monogamy than their male counterparts in opposite-sex marriages.

Another study in the United States (Balsam et al., 2008) found that same-sex couples reported more positive relationship quality and less conflict than opposite-sex couples; and within same-sex relationships, females reported fewer experiences of conflict relative to males. Again, Gottman (1994) underlined that relationship stability over time pertains to a couple's ability to resolve conflict. Strategies for resolving conflict in a relationship include validating the partner's feelings, reducing defensiveness, and adapting to the partner's conflict style.

Couples' Conflict and Psychophysical Impact of COVID-19 Pandemic

Theoretical and empirical knowledge of the impact of the COVID-19 pandemic on same-sex relationships is limited (Li and Samp, 2021a). Thus, the following sections review the small body of existing literature on same-sex couples' conflict associated with psychophysical challenges during the spread of COVID-19. Given the paucity of studies involving LGB couples, an overview of related research is presented, also considering studies on opposite-sex couples during the COVID-19 pandemic.

Some authors have analyzed the impact of the COVID-19 pandemic on adverse relationship processes (e.g., hostility, withdrawal, low responsive support) in opposite-sex (Günther-Bel et al., 2020; Luetke et al., 2020; Pietromonaco and Overall, 2021) and same-sex couples (Li and Samp, 2021a), studying the relevance of couples' pre-existing individual and contextual factors (e.g., age, social class, minority status) that determine relationship quality. Quantitative and mixed-method studies with participants based in Spain (Günther-Bel et al., 2020) and the United States (Luetke et al., 2020) have demonstrated that the COVID-19 pandemic has led to significant relational conflict in opposite-sex couples. Li and Samp (2021a), studying sexual minority people in the United States, found that complaint avoidance mediated the relationship between the adverse impacts of the pandemic on daily life and relationship satisfaction, reducing positive conflict and crisis management between partners.

The COVID-19 pandemic forced some couples to reorganize their living situation, with some couples moving in together despite a lack of readiness for cohabiting (Fish et al., 2020; Singer, 2020). This dynamic may have exposed couples to potential relational difficulties due to the greater time spent together, a heightened vulnerability to disaccord, and the resurfacing of historical issues (Günther-Bel et al., 2020; Luetke et al., 2020; Li and Samp, 2021a). Such rapid cohabitation—or, conversely, the stress of separation—may have led some sexual minority individuals to come out to family members or significant others, despite a prior intention to remain private about their sexual orientation and romantic relationships (Fish et al., 2020; Li and Samp, 2021b). Consequently, same-sex partners may have experienced reduced social support due to their sexual minority status, and this may have increased conflict and tension within their romantic partnership (Archuleta et al., 2011; Keneski et al., 2018). In addition, both separation and confinement may have represented further stresses (Pietromonaco and Overall, 2021) that limited opportunities for positive conflict management, underlining the importance of prior relationship quality (Antonelli and Dèttore, 2014).

Thus, the COVID-19 pandemic has compromised the well-being of the general population (Luo et al., 2020; Shahyad and Mohammadi, 2020; Vindegaard and Benros, 2020; Zhu et al., 2020) and, in particular, the disadvantaged minority population (Gonzales et al., 2020; Salerno et al., 2020a; Li and Samp, 2021a), generating adverse psychophysical health consequences such as depression, anxiety, substance abuse (i.e., alcohol and cannabis abuse; Price, 2020), and cumulative psychological distress. For many same-sex couples, worry about COVID-19 and the daily life interruptions associated with the pandemic has significantly impacted relationship quality, satisfaction, and general well-being (Li and Samp, 2021a). Furthermore, in many cases, the stress caused by separation or confinement has disrupted the interaction between same-sex partners. As reported previously, rapid cohabitation or the stress of separation may have revealed non-heterosexual relationships to significant others, thereby increasing sexual minority peoples' opportunities for experiencing rejection, adverse reactions, social exclusion, and discrimination.

Minority Stress and the COVID-19 Pandemic

The theoretical framework of the minority stress model (Meyer, 1995, 2003), which holds that prejudice, vigilance, isolation,

and discrimination are unique and chronic stressors among minority populations, may be applied to understand the impact of COVID-19 (and related factors) on LGB couples' psychophysical health. Previous studies have shown that minority stress is associated with adverse effects on both physical (Diamant and Wold, 2003) and psychological health (D'Augelli et al., 1998; Cochran and Mays, 2006). Thus, the COVID-19 pandemic may represent an indirect mechanism through which same-sex couples experience distal (e.g., discrimination, violence, interpersonal homophobia) and proximal (e.g., ISS, fear of rejection) minority stress (Meyer, 1995, 2003), thereby exacerbating their existing relationships by reducing satisfaction and increasing conflict.

Research has defined ISS as the most insidious dimension of minority stress within the LGB population (Meyer, 2003). Specifically, ISS has been identified as a significant factor in romantic relationship satisfaction, conflict, and violence (Rollè et al., 2018; Sommantico et al., 2018; Li and Samp, 2021b). ISS is the product of society's negative beliefs about sexual minority individuals, which some LGB people internalize; thus, it describes self-referred negative feelings and attitudes toward non-heterosexual sexual orientations (Mayfield, 2001; Herek and McLemore, 2013). Some researchers have found that LGB couples' physical and psychological health is negatively associated with high levels of ISS (Sommantico et al., 2018). Other studies have reported that same-sex couples' conflict and violence are correlated significantly and positively with ISS (Balsam and Szymanski, 2005; Carvalho et al., 2011; Rollè et al., 2018), highlighting the impact of this minority stressor on the quality of same-sex relationships. Previous research (Li and Samp, 2021a) has shown that complaint avoidance, conflict withholding, and higher levels of ISS damage same-sex relationships, leading to negative psychophysical consequences. Researchers have shown that contextual factors (e.g., worry about COVID-19; Pietromonaco and Overall, 2021) and minority stressors (e.g., ISS; Li and Samp, 2021a) may disrupt interactions between partners and increase conflict and discord.

Variables Associated With (Same-Sex) Couples' Conflict

Stanley et al. (2006) argued that, unless an analysis of same-sex couples' conflict also considers individual and contextual factors, the representation of same-sex relationships will be incomplete, and possibly confused. Indeed, several individual characteristics may be associated with same-sex couples' conflict and the adverse psychophysical challenges of sexual minority people during the COVID-19 pandemic, because pre-existing individual and contextual factors may predispose relationships to vulnerability. For instance, age, relationship duration, sexual satisfaction, and interpersonal partner violence [Intimate partner violence (IPV), defined as abusive behavior occurring within a romantic relationship, consisting of physical, sexual, or psychological violence] may significantly affect same-sex couples' conflict and psychophysical impact of COVID-19 pandemic.

Luetke et al. (2020) showed that COVID-19–related relationship conflict in opposite-sex couples differed significantly by age group, with younger participants (age range of entire sample: 18–94 years) reporting higher levels of conflict. Regarding other socio-demographic variables, some studies have documented sexual orientation differences in couples' conflict, whereby people self-identifying as bisexual report higher rates of conflict within same-sex relationships (Li and Samp, 2021a) and IPV (Whitfield et al., 2021) than lesbian women, gay men, and heterosexual persons. With respect to relationship duration, relationship stability over time has been shown to increase partners' ability to resolve conflict through constructive and consolidated management (Gottman, 1994).

Although previous research has reported no significant differences between same-sex couples and opposite-sex couples regarding conflict over religious beliefs and involvement (Solomon et al., 2005), the present study included religiosity as a covariate, given that the study was conducted in Italy, where the Catholic Church's symbolic power plays a decisive role in the lives of many sexual minority people (Baiocco and Pistella, 2019). In addition, lack of involvement in LGB associations has been linked to deficits in the constructive management of conflict and increased psychophysical problems. Lorenzi et al. (2015), in line with previous research (Russell and Richards, 2003), suggested that LGB associations constitute a significant source of social support for same-sex couples, enhancing their positive coping strategies, bestowing essential skills, and helping LGB people to become more capable of resolving conflict in their romantic relationships. Studies have also demonstrated that sexual satisfaction in same-sex and opposite-sex couples (Gottman et al., 2003; Cahill et al., 2020; Mendoza et al., 2020) is a protective factor for couples' well-being. Moreover, sexual satisfaction is a relevant index of life quality, associated with psychophysical problems (Fleishman et al., 2020).

Finally, although previous research has shown that same-sex couples report comparable or lower levels of conflict management compared to opposite-sex couples (Gottman, 1994; Kurdek, 2004; Solomon et al., 2005; Balsam et al., 2008), studies focused on IPV have highlighted that the phenomenon occurs in same-sex couples at a comparable (Rollè et al., 2018) or even higher rate (Graham et al., 2019; Whitfield et al., 2021) than it does in opposite-sex couples. Breiding et al. (2013) reported that over 50% of gay men and approximately 75% of lesbian women in their study were victims of psychological IPV; on this basis, they identified more than 4 million sexual minority people with an experience of IPV in the United States.

THE PRESENT STUDY

Evidence suggests that psychophysical challenges may influence the degree of conflict within romantic relationships (Solomon et al., 2005; Gonzales et al., 2020; Li and Samp, 2021a,b). For example, Ogolsky and Gray (2016) showed that daily negative emotions mediated the relationship between conflict and reports of a partner's relationship maintenance in a sample of same-sex couples in the United States. Other studies have highlighted that the adverse effects on psychophysical health of the COVID-19

pandemic (Pietromonaco and Overall, 2021) and higher levels of ISS (Li and Samp, 2021a) may predict couples' conflict.

To our knowledge, very little research has investigated the relationship between the psychophysical impact of the COVID-19 pandemic and same-sex couples' conflict, as well as the potential mediators of this relationship (Li and Samp, 2021a). We hypothesized a mediation model whereby ISS explained the association between the psychophysical impact of the COVID-19 pandemic and same-sex couples' conflict, and we applied this model to a sample of Italian LGB people. Italy was deemed a good case study for this investigation involving ISS, as the country is defined by conservative and religious values (Lingiardi et al., 2016; Baiocco et al., 2019). In Italy, sexual stigma and negative attitudes are still widespread, and few supportive policies for sexual minority people have been enacted relative to other Western nations (Hässler et al., 2021).

In addition, the diffusion of COVID-19 in Italy and the consequent health emergency gave rise to numerous social distancing measures. For instance, from March 9th to June 3rd, 2020, Italy went into lockdown, depriving all residents of positive social relations with friends, significant others, and supportive figures. In particular, the elimination of LGB social events limited opportunities for LGB people to receive support from the LGB community. In addition, the restrictive measures forced many LGB people to move into homes that were potentially unsafe (e.g., family homes with unsupportive parents).

During the COVID-19 pandemic, many LGB people were at increased risk of experiencing family rejection, harassment, victimization, and associated negative psychophysical health consequences (Salerno et al., 2020a,b). Many sexual minority people who were not out were prevented from living their lives authentically with their same-sex partner; they thereby suffered from increased ISS and the fear of discovery, as well as the potential negative consequences of such discovery, including psychological/physical abuse or homelessness. In many cases, the risk of being outed also rose for LGB couples who moved in together, putting them at greater risk of experiencing, for example, negative reactions from unsupportive parents (Fish et al., 2020; Li and Samp, 2021b).

The present study involved a mediation model focused on ISS because this minority stressor is considered the most dangerous stressor in the model proposed by Meyer (2003), reflecting internalized negative attitudes toward the self with respect to one's non-heterosexual sexual orientation (Baiocco and Pistella, 2019). To complement previous empirical investigations on this subject, the study aimed at examining the effect of the psychophysical impact of COVID-19 pandemic on same-sex couples' conflict, both directly and indirectly (*via* ISS), also considering some individual and contextual factors as covariates.

Specifically, based on previous research, we hypothesized that: (1) The psychophysical impact of COVID-19 pandemic would be associated with higher levels of same-sex couples' conflict (Hypothesis 1); (2) ISS would be related to the psychophysical impact of COVID-19 pandemic and increased levels of same-sex couples' conflict (Hypothesis 2); and (3) participants' ISS would mediate the association between the psychophysical impact of COVID-19 pandemic and same-sex couples' conflict (Hypothesis 3). In addition, given that some socio-demographic characteristics (e.g., age, biological sex, sexual orientation, relationship duration, religiosity, involvement in LGB associations, sexual satisfaction, IPV) have been shown to be relevant predictors of couples' conflict (Solomon et al., 2005; Riggle et al., 2014; Lorenzi et al., 2015; Cahill et al., 2020; Fleishman et al., 2020; Whitfield et al., 2021), these factors were included as covariates in the analyses.

MATERIALS AND METHODS

Procedures

An Internet-based survey (requiring 15–20 min to complete) was administered using Qualtrics. To recruit participants, we contacted LGB associations and requested them to invite their members to contribute to the study. Most participants (63%) were recruited from LGB associations and organizations in Rome (Italy). The remaining 37% were contacted *via* professional mailing lists, advertisements posted on websites and social networks, and an online link to the survey. We clarified to participants that the purpose of the study was to investigate the quality of same-sex relationships in sexual minority people. This explanation was made intentionally generic because we did not want respondents to know the true research objectives. Participants were recruited online between October 2020 and February 2021.

The inclusion criteria to participate were: (a) Italian nationality; (b) lesbian, gay, or bisexual sexual orientation; (c) cisgender identity; (d) aged 18 years or older; and (e) in a same-sex romantic relationship for at least 5 months (Kılıç and Altınok, 2021). Based on these criteria, four participants were excluded because they were not Italian, seven were excluded because they were not cisgender or LGB, and two were excluded because they did not complete the entire set of questionnaires. The research did not include persons with other non-heterosexual sexual orientations and non-cisgender people, because previous studies have reported that the factors that affect psychophysical health in these populations are significantly different from those that impact LGB people; furthermore, the relational dynamics of these populations have also been found to differ in numerous respects. Accordingly, future research should seek to investigate the relevance of couples' conflict in these populations.

Participation in the study was voluntary and anonymous, and informed consent was acquired from all respondents. No compensation was provided. In total, 95% of the questionnaires were entirely filled in. Prior to data collection, the research protocol was approved by the Ethics Commission of the Department of Developmental and Social Psychology of the Sapienza University of Rome (Italy). All procedures performed with human participants were conducted in accordance with the ethical standards of the institutional and/or national research committee and the 1964 Helsinki Declaration and its later amendments.

Participants

The study sample consisted of 232 Italian participants (56% male; n = 101) who self-identified as lesbian women (18%; n = 41), gay men (35%; n = 80), and bisexual people (47%; n = 111).

Participants ranged in age from 18–45 years (M_{age} = 28.68, SD = 6.91). Twenty-seven respondents had been engaged in a stable relationship for less than 1 year (12%; n = 27), 43 had been in a stable relationship for 6–10 years (18%; n = 43), and 18 had been in a stable relationship for more than 10 years (8%; n = 18); the majority of participants had been involved in a stable same-sex relationship for 1–5 years (62%; n = 144). Approximately 12% (n = 29) of participants were legally married or civilly united. Nearly 45% (n = 104) cohabited with their same-sex partner during the pandemic and had continuously lived with their partner since that time. Fewer than half of the participants (36%; n = 84) were not involved in any LGB association. **Table 1** presents the demographic data and descriptive statistics of the measures.

Measures

Sociodemographic Variables

Baseline sociodemographic variables included age, biological sex (0 = female; 1 = male), and relationship duration (0 = < 1 year; 1 = 1–5 years; 2 = 6–10 years; 3 = > 10 years). Religiosity was measured by asking participants to report their religious involvement on a 4-point Likert-type scale ranging from 1 (*low involvement*) to 4 (*high involvement*). Respondents were required to indicate whether they were involved in any LGB association at the time of study (0 = no; 1 = yes).

Participants were asked to indicate their sexual orientation using the following response alternatives: "gay," "lesbian," "bisexual," or "other, please specify." On this basis, a dichotomous variable was created (0 = lesbian/gay; 1 = bisexual). Participants who selected "other" self-identified as "queer" (n = 3), and were not included in the analysis. In addition, participants were asked to report their gender identity, as follows: 0 = woman; 1 = man; 2 = transgender, male to female; 3 = transgender, female to male; 4 = transgender, gender non-conforming; and 5 = other, please indicate. Participants who self-identified as transgender (n = 4) were not included in the analysis. Thus, given that we included all participants who self-identified as cisgender (i.e., whose birth-assigned sex and gender identity were aligned), we did not incorporate gender identity as a variable in our analyses.

Couples' Conflict During the COVID-19 Pandemic

Inspired by previous research (Luetke et al., 2020), we used a 6-item measure to assess participants' perception of conflict in their romantic relationship during the COVID-19 pandemic. Each item was rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating greater levels of conflict. An example item was: "Tension and conflict with my romantic partner increased during the spread of COVID-19." In the present study, reliability analyses indicated a high degree of internal consistency, with Cronbach's alpha = 0.79.

Psychophysical Impact of COVID-19 Pandemic

Participants were asked to indicate the adverse impacts of the pandemic on their psychophysical health. Using the Coronavirus Impacts Questionnaire (Conway et al., 2020), participants responded to 2-items indexing the negative impacts of the COVID-19 pandemic on physical (e.g., "How has the spread of COVID-19 affected your physical well-being?") and psychological health (e.g., "How has the spread of COVID-19 affected your psychological well-being?"). Each item was rated on a 7-point Likert scale ranging from 1 (*it improved considerably*) to 7 (*it worsened considerably*), with higher scores indicating greater negative impacts of the pandemic on psychophysical health. The correlation between these two items was high, r = 0.65.

Measure of Internalized Sexual Stigma – Short Version

A short version of the Measure of Internalized Sexual Stigma (MISS) was used to evaluate LGB people's ISS, through 6-items (Lingiardi et al., 2012; Pistella et al., 2020). Example items included: "I do not believe in love between LGB people" and "I would prefer to be heterosexual." Each item was rated on a 5-point Likert scale ranging from 1 (*I disagree*) to 5 (*I agree*), with higher scores indicating greater ISS. Cronbach's alpha was 0.65.

Sexual Satisfaction

A short version of the New Scale of Sexual Satisfaction (Zheng and Zheng, 2017) was used to measure sexual satisfaction. Using a 3-item version, participants were asked to rate their satisfaction with the quality of their sex life during the prior 12 months, their desire toward their partner, and their sexual attraction (e.g., personal satisfaction with "the sexual activity in your relationship"). Responses were indicated on a 7-point Likert scale ranging from 1 (*extremely dissatisfied*) to 7 (*extremely satisfied*), with higher scores reflecting greater satisfaction with one's sex life. The scale had high internal consistency, with Cronbach's alpha = 0.85.

Intimate Partner Violence

The Conflict Tactics Scale Short Form (Straus and Douglas, 2004) is an 18-item measure that is used to investigate particular tactics for managing conflict in romantic relationships: *physical assault* (e.g., "I pushed, shoved, or slapped my partner"), *psychological aggression* (e.g., "I insulted or swore or shouted or yelled at my partner"), *injury from assault* (e.g., "I had a sprain, bruise, or small cut, or felt pain the next day because of a fight with my partner"), and *sexual coercion* [e.g., "I insisted on sex when my partner did not want to or insisted on sex without a condom (but did not use physical force")]. Respondents are asked to indicate how many times a particular behavior has occurred over the prior year. Items evaluate both IPV perpetration (e.g., "I punched or kicked or beat-up my partner") and IPV victimization (e.g., "My partner punched or kicked or beat me up").

Previous research has revealed that the total score of violence on this scale is a proxy for violence within a romantic relationship (Straus et al., 1996), in which all subdomains of violence are averaged. A total score is derived from the 8-point Likert scale, ranging from 0 (*never in the past year*) to 7 (*more than 20 times in the past year*), with higher scores indicating more violence. Given that the present study aimed at controlling for previous episodes of violence within a romantic relationship, rather than examining different forms of IPV, we used the total score for all analyses. Cronbach's alpha was 0.60 (IPV perpetration) and

0.61 (IPV victimization), with a high correlation between these dimensions, $r = 0.71$.

Data Analysis

We conducted the analyses using the Statistical Package for the Social Sciences (SPSS 25.0). Group differences (in terms of biological sex) were examined using a Chi-square test, univariate analyses of variance, and *t*-tests. Bivariate correlations (Pearson's *r*, two-tailed) were calculated to explore associations between couples' conflict, the psychophysical impact of COVID-19 pandemic, ISS, and the other study variables.

Moreover, a mediation model analysis was employed to test the direct and mediating effects of the psychophysical impact of COVID-19 pandemic and ISS on same-sex couples' conflict (with age, biological sex, sexual orientation, relationship duration, religiosity, involvement in LGB associations, sexual satisfaction, and IPV as covariate variables). We also examined moderated mediation models to verify the effect of biological sex in our model (Pace and Zappulla, 2013; Pace et al., 2018). We used the Process SPSS macro (Hayes, 2013) to evaluate the statistical significance of the direct and mediating effects with bias-corrected bootstrapping (5,000 samples) and 95% confidence intervals (CI). The continuous variables were standardized to *z*-scores prior to analysis, and non-normal variables (such as IPV perpetrators and victims) were logarithmically transformed before the regression association hypotheses were tested.

RESULTS

Biological Sex Differences and Correlations Among the Study Variables

Table 1 presents the descriptive statistics of the measures, differentiated by biological sex. No biological sex differences were found in couples' conflict, the psychophysical impact of COVID-19 pandemic, ISS, sexual satisfaction, and IPV subdimensions (i.e., perpetrators, victims). A Chi-square test detected a significant difference between females and males in sexual orientation, $\chi^2(1,231) = 52.46$, $p < 0.001$, showing that females (69%) self-identified as bisexual more frequently than males (21%). This result is aligned with the findings of previous studies. Additionally, an examination of the standardized residuals, $\chi^2(1,231) = 9.10$, $p = 0.03$, revealed that relationship duration was longer (>11 years) among males (13%), relative to females (4%).

We performed bivariate correlation analyses to examine the relationship between couples' conflict, psychophysical impact of COVID-19 pandemic, ISS, and the other study measures (see **Table 2**). The results showed a significant positive moderate correlation between same-sex couples' conflict and psychophysical challenges during the Italian spread of COVID-19. Furthermore, couples' conflict and psychophysical impact of the COVID-19 pandemic were positively associated with ISS. Of note, couples' conflict was negatively associated with age and sexual satisfaction. Finally, both IPV perpetration and IPV victimization were significantly correlated with couples' conflict and sexual satisfaction.

Couples' Conflict, Psychophysical Impact of COVID-19 Pandemic, and Internalized Sexual Stigma: A Mediation Model

We constructed a mediation model in which the relationship between self-perception of psychophysical challenges and couples' conflict during the COVID-19 pandemic was mediated by the ISS of sexual minority participants. We adjusted the analyses for age, biological sex, sexual orientation (lesbian/gay

TABLE 1 | Descriptive (means, standard deviations, percentages) of the sample's characteristics.

	Females (n = 131) M(SD) or n(%)	Males (n = 101) M(SD) or n(%)	Total sample (n = 232) M(SD) or n(%)	$t/F/\chi^2$	p
1. Couple's conflict	2.35 (0.78)	2.24 (0.67)	2.30 (0.74)	1.03	0.31
2. Psychophysical impact of the COVID-19 pandemic	5.01 (1.14)	5.06 (1.08)	5.03 (1.11)	0.09	0.76
3. ISS	1.52 (0.56)	1.66 (0.58)	1.58 (0.57)	3.50	0.06
4. Age	26.83 (5.86)	31.07 (7.44)	28.68 (6.91)	−4.71	<0.001
5. Sexual orientation (lesbian/gay)	41 (31%)	80 (79%)	121 (52%)	52.46	<0.001
6. Relationship duration (<1 year)	18 (14%)	9 (9%)	27 (12%)	9.10	0.03
1–5 years	87 (66%)	57 (56%)	144 (62%)		
6–10 years	21 (16%)	22 (22%)	43 (18%)		
More than 10 years	5 (4%)	13 (13%)	18 (8%)		
7. Religiosity	1.48 (0.72)	1.44 (0.64)	1.46 (0.69)	0.50	0.61
8. LGB Associations (yes)	90 (69%)	58 (57%)	148 (64%)	3.14	0.07
9. Sexual satisfaction	5.75 (1.03)	5.52 (1.22)	5.66 (1.12)	2.43	0.12
10. IPV perpetrators	0.27 (0.40)	0.28 (0.33)	0.28 (0.36)	0.02	0.89
11. IPV victims	0.28 (0.39)	0.26 (0.33)	0.27 (0.37)	0.11	0.74

ISS, internalized sexual stigma; IPV, interpersonal partner violence. The $t/F/\chi^2$ refers to the biological sex differences in the total sample (females and males). Standard deviations and percentages are in parentheses.

TABLE 2 | Correlations between couples' conflict, the psychophysical impact of the COVID-19 pandemic, ISS, and other variables included in the study.

	1	2	3	4	5	6	7	8	9	10
1. Couple's conflict	1.00									
2. Psychophysical impact of the COVID-19 pandemic	0.18**	1.00								
3. ISS	0.20**	0.15*	1.00							
4. Age	−0.18**	−0.05	−0.12	1.00						
5. Relationship duration	−0.12	−0.05	−0.12	0.54**	1.00					
6. Religiosity	−0.07	−0.14*	0.10	0.09	0.04	1.00				
7. LGB Associations	0.09	0.17**	−0.14*	−0.07	0.01	−0.11	1.00			
8. Sexual satisfaction	−0.21**	−0.07	−0.03	−0.24**	−0.22**	−0.02	−0.06	1.00		
9. IPV perpetrators	0.25**	0.03	0.06	−0.03	0.07	−0.05	−0.01	−0.27**	1.00	
10. IPV victims	0.27**	0.11	0.04	−0.15*	0.03	−0.08	0.04	−0.24**	0.71**	1.00

$^{**}p < 0.01$, $^{*}p < 0.05$. ISS, internalized sexual stigma.

vs. bisexual), relationship duration, religiosity, involvement in LGB associations, sexual satisfaction, and IPV perpetration and victimization. **Figure 1** displays the results.

To test our first hypothesis, we ran our model without the mediator, and found a significant association between the psychophysical impact of the COVID-19 pandemic and couples' conflict during the spread of COVID-19 (β path c in **Figure 1**). To test our second hypothesis, we entered ISS as a predictor of same-sex couples' conflict. The results showed that ISS was significantly and positively associated with conflict levels. When we entered ISS as a mediator, the direct effect between the psychophysical impact of COVID-19 pandemic and couples' conflict lost significance (β path c in **Figure 1**), providing support for our third hypothesis. The individual paths revealed that the psychophysical impact of the COVID-19 pandemic was positively related to ISS (β path a), which, in turn, was positively related to high levels of couples' conflict (β path b). Psychophysical impact of COVID-19 pandemic and ISS accounted for a significant degree of variance in same-sex couples' conflict, $F(11, 220) = 4.77$, $p < 0.001$, $R^2 = 0.20$.

The indirect effects showed that ISS significantly mediated the association between psychophysical impact of COVID-19 pandemic and couples' conflict [bootstrapping estimate = 0.04, $SE = 0.02$, 95% CI (0.01,0.07)]. Among the covariates considered in the model, only sexual satisfaction, $\beta = -0.18$, $SE = 0.07$, $p < 0.01$, was associated with couples' conflict, while age, $\beta = -0.08$, $SE = 0.08$, $p = 0.33$; biological sex, $\beta = -0.03$, $SE = 0.14$, $p = 0.86$; sexual orientation, $\beta = 0.18$, $SE = 0.15$, $p = 0.21$; relationship duration, $\beta = -0.09$, $SE = 0.07$, $p = 0.24$; religiosity, $\beta = -0.04$, $SE = 0.06$, $p = 0.57$; involvement in LGB associations, $\beta = 0.12$, $SE = 0.13$, $p = 0.36$; IPV perpetration, $\beta = 0.25$, $SE = 0.24$, $p = 0.28$; and IPV victimization, $\beta = 0.34$, $SE = 0.24$, $p = 0.16$, were not.

In addition, we verified the effect of biological sex as a moderator in this relationship, but found no significant findings. Finally, given that sexual satisfaction was negatively related to couples' conflict ($r = -0.21$, $p < 0.01$), an alternative model was tested using the same key variables, and ISS and sexual satisfaction as mediators (results available upon request). Specifically, we tested a mediation model in which couples' conflict was the dependent variable, the psychophysical impact of the COVID-19 pandemic was the independent variable, and ISS and sexual satisfaction were the mediators. However, the association between the psychophysical impact of the COVID-19 pandemic and sexual satisfaction was not significant. Therefore, we evaluated our original model as the most adequate for describing the association between the psychophysical impact of the COVID-19 pandemic and couples' conflict.

DISCUSSION

The present study aimed at extending existing knowledge about the relationship between psychophysical challenges and same-sex couples' conflict during the COVID-19 pandemic, drawing on a sample of 232 LGB participants engaged in a same-sex relationship. In particular, the research contributed to our understanding of the relationship between the psychophysical impact of the COVID-19 pandemic and same-sex couples' conflict, as well as our understanding of ISS as a potential mediator of this relation. While previous research (Solomon et al., 2005; Ogolsky and Gray, 2016; Gonzales et al., 2020) has suggested that psychophysical challenges may impact couples' conflict, to our knowledge, only one study (Li and Samp, 2021a) has examined similar variables during the COVID-19 pandemic, including potential mediators that may explain their association.

In line with previous research, our analyses showed no significant differences between sexual minority females and sexual minority males with respect to ISS (Pistella et al., 2020), sexual satisfaction (Gottman et al., 2003), and IPV subdimensions (Balsam et al., 2008; Chong et al., 2013). Contrary to the literature, which shows that females report lower levels of couples' conflict (Kurdek, 2004; Solomon et al., 2005) and are more likely to suffer from adverse psychophysical health during the pandemic period compared to males (Luo et al., 2020; Vindegaard and Benros, 2020), we found no differences between females and males on either of these two variables. It is likely that our failure to identify biological sex differences regarding couples' conflict was due to the fact that we did not investigate all areas in which female and male couples have been found to differ, such as attitudes toward sex outside of the relationship (Solomon et al., 2005).

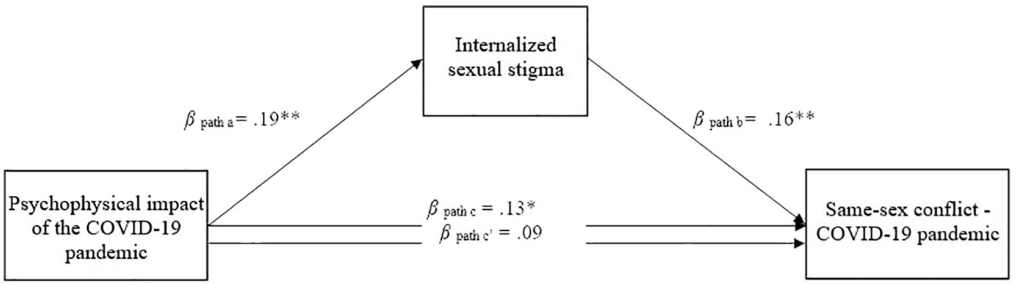

FIGURE 1 | The mediated effect of internalized sexual stigma on the relationship between the psychophysical impact of the COVID-19 pandemic and couples conflict ($n = 232$). *$p < 0.05$, **$p < 0.1$. All values are beta coefficients.

A possible explanation for the lack of biological sex differences with respect to the psychophysical impact of the COVID-19 pandemic is that previous studies have included a sample of opposite-sex couples, and research suggests that LGB people (and in fact all disadvantaged populations) develop skills for tolerating difficult emotions and coping with feared events (e.g., discrimination, violence, social isolation, rejection) in unsupportive and unsafe environments (Ryan et al., 2009; Antonelli and Dèttore, 2014). Such skills and coping strategies may have protected LGB people from the deleterious effects of the COVID-19 pandemic, regardless of their biological sex.

In line with our first hypothesis, we found a significant negative association between psychophysical challenges and same-sex couples' conflict during the Italian spread of COVID-19. This finding is aligned with the results of prior research showing that daily negative feelings and adverse health outcomes may influence the degree of couples' conflict (Ogolsky and Gray, 2016; Li and Samp, 2021a). Li and Samp (2021a) found a strong association between pandemic-related factors and individual well-being (e.g., anxiety, depression) among sexual minority people. The same authors reported that daily life interruptions during the pandemic significantly impacted same-sex couples' conflict management.

Thus, we tested the association between ISS and same-sex couples' conflict. The results supported our second hypothesis, suggesting that ISS was the primary variable predicting conflict in same-sex relationships. This finding is not surprising, given that higher ISS has been related to lower relationship quality in same-sex couples (Li and Samp, 2021b). The scale used to evaluate ISS in the present study contained the item "I do not believe in love between LGB people"; such an attitude may generate difficulties in conflict management for same-sex partners, especially with respect to relationship acceptance (Lingiardi et al., 2012). People with higher ISS often feel less confident about their same-sex relationships and are more likely to engage in hostile and conflictual conversations with their partners (Li and Samp, 2019).

In addition, ISS may imply the presence of a *don't ask, don't tell* attitude that prevents sexual minority people from being open about their sexual identity. Such an attitude is typical of the Italian context and may—both directly and indirectly—increase conflict within same-sex relationships (Fish et al., 2020; Pistella et al., 2020). Indeed, some sexual minority people avoid disclosing their sexual identity, for fear of adverse consequences, including negative reactions, isolation, and discrimination. As mentioned previously, the trend toward rapid cohabitation during the COVID-19 pandemic may have led many LGB people to come out to significant others, even if they may not have previously intended to disclose their romantic relationship. Added to this, the stress of being separated from one's partner may have encouraged same-sex couples to come out to their families—despite the *don't ask, don't tell* culture—given that, if they were living at home during the pandemic, they may have been prevented from living out their romantic relationship. Thus, high ISS levels may have increased couples' conflict due to a fear of disclosing their sexual identity. However, this explanation is only speculative, and is not supported by data from the present study.

The final model confirmed our third hypothesis about the mediating role of ISS in the association between psychophysical challenges and same-sex couples' conflict during the COVID-19 emergency. Importantly, in the mediation models tested to verify the third hypothesis, ISS was found to mediate the relationship between the psychophysical impact of the COVID-19 pandemic and same-sex couples' conflict in LGB participants. This finding has remarkable implications for our understanding of the underlying mechanism of increased conflict in same-sex relationships. Specifically, the mediation effect supports the explanation that ISS, over and above the adverse effects of the COVID-19 pandemic on psychophysical health, arouses conflict within same-sex couples, regardless of the partners' age, biological sex, sexual orientation, relationship duration, religiosity, involvement in LGB associations, and history of IPV.

LIMITATIONS AND FUTURE DIRECTIONS

Although the present research has numerous strengths, several limitations should also be noted. First, the study was based on a convenience sample, and it was geographically restricted to Italy, thereby limiting the generalizability of the results. Another limitation regards the use of self-report measures, which may be influenced by social desirability. Furthermore, we recruited LGB people (Pistella et al., 2019), and our results may not apply to other sexual and gender minority individuals (e.g., queer,

pansexual, and transgender people). Additionally, we did not consider some variables that are likely to relate to same-sex couples' conflict, such as emotional and sexual infidelity, coming out, and political orientation.

Moreover, we did not analyze participants' levels of positive LGB identity (Riggle et al., 2014; Petrocchi et al., 2020), even though this may significantly predict ISS and same-sex couples' conflict, and represent a protective factor against stress resulting from the COVID-19 pandemic. Accordingly, this variable should be considered in future research. In the present study, the adverse effects of the pandemic on psychophysical health were determined *via* two items, which were not supported by standardized measures. Recently, a scale was developed for assessing the psychophysical impact of the COVID-19 pandemic (Coronavirus Impacts Questionnaire; Conway et al., 2020); however, this measure has not yet been validated, and its psychometric properties have not been tested.

Future research should consider the role of the perceived threat of COVID-19 retrospectively, in addition to other pandemic-related factors, such as a COVID-19 diagnosis or symptoms, loss caused by the COVID-19 pandemic, or financial challenges associated with COVID-19. Finally, a main limitation of the study is that data were collected from only one partner in each same-sex couple. Successful recruitment of both same-sex partners should be a goal of future research, despite this being a widely acknowledged research challenge.

CONCLUSION

Understanding the effects of the COVID-19 pandemic on same-sex relationships is a complex objective. The present study extended knowledge about the impact of the health emergency on same-sex couples' relational and personal well-being, showing that ISS may represent one of the main factors contributing to negative and conflictual interactions within same-sex romantic relationships (Salerno et al., 2020a). Studying the role of ISS in various relational and social contexts is important, due to its negative consequences on well-being, positive identity, and mental health in sexual minority people (Hart, 1995). Attention is needed at the structural level to reduce the risk of discrimination for LGB people in any setting. In this vein, anti-discriminatory campaigns and training programs about the relevance of inclusive practices for the well-being of LGB couples are recommended, as such programs may help LGB people (and their partners) decrease their levels of ISS.

It is worth noting that the *International Guidelines on Disaster Response* fail to consider the needs of LGB populations (Salerno et al., 2020a). The paucity of research on the LGB population during the COVID-19 pandemic speaks to the invisibility of LGB persons in the current public health response to the COVID-19 emergency. However, protecting the health of LGB individuals is pivotal, given their greater risk for developing psychophysical problems as a result of both minority and pandemic stress.

During this health emergency, positive and affirming social interactions with LGB individuals must be maintained *via* online instruments, such as video conferencing and social media, to mitigate the negative effects of the abovementioned stressors (Baiocco et al., 2021). Furthermore, public health stakeholders should disseminate provider information and parental resources to promote family acceptance of LGB persons' identities (Phillips et al., 2020), and thereby improve the mental and physical health and well-being of sexual minority people. Finally, public agencies should make detailed and clear statements about the well-being of LGB people, increasing public awareness of the mental health vulnerabilities of LGB persons during the COVID-19 pandemic.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Ethics Commission of the Department of Developmental and Social Psychology, Sapienza University of Rome. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

RB, FL, and SIs: conception and design. JP, SIo, and SIs: material preparation and data collection. RB, JP, and SIo: methodology, formal analyses, and investigation. JP and SIs: writing – original draft preparation. RB and FL: writing – review and editing. All authors read and approved the final manuscript.

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Romantic Attachment, Internalized Homonegativity, and Same-Sex Intimate Partner Violence Perpetration Among Lesbian Women in Italy

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Same-Sex Intimate Partner Violence (SSIPV) among lesbian women has been underestimated until few decades ago. While the association between romantic attachment and SSIPV has been widely demonstrated, mechanisms that mediate this association and the complex relationships between romantic attachment, SSIPV, and SSIPV-specific risk factors have not been adequately investigated to date. The current study assessed the influence of romantic attachment on SSIPV perpetration among lesbian women, exploring the mediating role of internalized homonegativity within this association. Three hundred and twenty-five Italian lesbian women with a mean age of 30 years were recruited and completed the following self-report measures: the Experiences in Close Relationships-Revised (ECR-R), the Measure of Internalized Sexual Stigma, and the Revised Conflict Tactics Scale Short Form. The results showed a positive association between attachment anxiety, and general and psychological SSIPV perpetration. Similarly, attachment avoidance was positively related with general, psychological, and physical SSIPV perpetration. The association between romantic attachment, and general and psychological SSIPV was partially mediated by internalized homonegativity. These findings have theoretical implications and provide valuable information to implement services and interventions tailored for SSIPV, to date scarce and not effective.

Keywords: Same-Sex Intimate Partner Violence, perpetration, romantic attachment, internalized homonegativity, minority stress, LGBT+, lesbian women

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INTRODUCTION

Gender-based violence or Violence Against Women (VAW) has been object of interest since the 1970s. Second-wave feminism increased attention toward this phenomenon, recognizing it as a complex social issue (McClennen, 2005; Rollè et al., 2021). In contrast, Intimate Partner Violence (IPV) among lesbian women, and more in general Same-Sex Intimate Partner Violence (SSIPV), have been largely underestimated until few decades ago (Edwards et al., 2015; Estes and Webber, 2017; Rollè et al., 2020). Despite the lack of attention by public opinion and researchers toward this phenomenon, in a representative study of the United States population by Walters et al. (2013), 36.3 and 63.0% of lesbian women reported to experience within a romantic relation physical and

psychological abuse respectively. In addition, no differences emerged when IPV prevalence rate among lesbian women was compared with that among heterosexual women.

Although IPV entails negative consequences on the physical and psychological wellbeing of victims, only few studies explored risk factors associated with couple violence perpetration among same-sex couples. Within these, SSIPV was associated with psychological (e.g., depression, self-esteem, and romantic attachment), relational (e.g., dyadic adjustment, relationship satisfaction, and fusion), family of origin-related and sexual minority-specific factors (e.g., internalized homonegativity; LGB+ community support), substance use, and sexual behaviors (Balsam and Szymanski, 2005; Bartholomew et al., 2008; Stults et al., 2015; Gabbay and Lafontaine, 2017a; Stephenson and Finneran, 2017; Miltz et al., 2019; Wei et al., 2020; Sharma et al., 2021). Further shed light on risk factors of SSIPV perpetration can inform services and social policies in order to decrease its prevalence and relapses.

Romantic Attachment and Same-Sex Intimate Partner Violence

Romantic attachment refers to the bond between intimate partner that promotes physical closeness and emotion regulation in time of fear, threat, and distress (Hazan and Shaver, 1987). Unlike childhood attachment from which it stems (which has the same function, but it is asymmetrical in nature), romantic attachment implies a symmetrical relation in which both partners rely on the other as a safe heaven and secure base (Santona et al., 2019). It is mainly assessed along two dimensions (Brennan et al., 1998; Fraley et al., 2000): attachment anxiety, which is characterized by fear of rejection, fear of abandonment, and separation anxiety, and it is associated with the hyperactivation of the attachment system; and attachment avoidance, which is concerned with discomfort with closeness and fear of intimacy, and it is related with the deactivation of the attachment system (Mikulincer and Shaver, 2005).

Romantic attachment has been found as a predictor of IPV perpetration among both heterosexual and sexual minorities (Bartholomew et al., 2008; Derlega et al., 2011; Gabbay and Lafontaine, 2017a,b; Velotti et al., 2018; Santona et al., 2019). From the attachment perspective, couple violence can be seen as an extreme attempt to regulate affect and physical distance from the partner. According with this assumption, people with high levels of attachment anxiety seem to perpetrate IPV as an attempt to maintain closeness with the partner (Allison et al., 2007; Bartholomew et al., 2008; Gabbay and Lafontaine, 2017a). In contrast, people with high levels of attachment avoidance can resort to IPV with the aim to avoid closeness and the fear of intimacy it entails (Allison et al., 2007; Gabbay and Lafontaine, 2017a).

Romantic Attachment, Internalized Homonegativity, and Same-Sex Intimate Partner Violence

While the relation between romantic attachment and IPV is well-documented, little attention has been paid to mechanisms through which it influences the risk of SSIPV perpetration among lesbian women and to the complex relation between romantic attachment and other risk factors that characterize SSIPV. Within this class of variables (i.e., SSIPV-specific risk factors), internalized homonegativity, which refers to negative affect and attitudes directed toward the self and one's personal sexual orientation (Meyer, 1995, 2003), seem to take a main role in predicting IPV perpetration among sexual minorities. Several studies identified a positive association between levels of internalized homonegativity and SSIPV perpetration (Balsam and Szymanski, 2005; Edwards and Sylaska, 2013; Suarez et al., 2018; Miltz et al., 2019). As reported by authors (Byrne, 1996; Cruz and Firestone, 1998; Bartholomew et al., 2008) and drawing from a psychodynamic conception of violence (Glasser, 1998; Fonagy, 1999; Asen and Fonagy, 2017; Yakeley, 2018), the internalization of the sexual stigma can entail a negative representation of the self and negative affect (e.g., shame, humiliation) which are experienced as unbearable and psychically threatening by the subject. These affect and negative representations, when too intense to be regulated through functional emotion regulation mechanisms, can be regulated through pre-mentalistic strategies (projection or body-mediated strategies) resulting in violent behaviors aimed at avoiding psychic disorganization.

Some recent studies suggest that internalized homonegativity is influenced by romantic attachment (Jellison and McConnell, 2003; Keleher et al., 2010; Ingoglia et al., 2019; Calvo et al., 2020). People with a secure attachment have positive self-other representation, and psychic and relational resources that can promote acceptance of one's sexual identity and protect them from internalized homonegativity (Calvo et al., 2020; Collins and Levitt, 2021). In contrast, people with insecure attachment shown negative self-other representation that can make them vulnerable to the internalization of sexual stigma. Accordingly, attachment anxiety was found to be positively associated with internalized homonegativity among both lesbian and gay people (Keleher et al., 2010; Calvo et al., 2020). As proposed by several authors (Calvo et al., 2020; Collins and Levitt, 2021), people with higher levels of attachment anxiety relies on others for personal evaluation, are sensitive to rejections, and have a negative self-representation (Santona et al., 2021) that can expose them to a self-devaluation through the internalization of social homonegative attitudes. According with the Integrated Attachment and Sexual Minority Stress Model (Cook and Calebs, 2016), it can be supposed that these internalized attitudes can further strengthen a negative representation of the self, following a vicious circle that can result in the development of an insecure attachment and negatively impact psychological wellbeing (Cook and Calebs, 2016; Collins and Levitt, 2021; Shenkman et al., 2021).

Attachment avoidance has been found to be related with increased levels of internalized sexual stigma among LG people as well (Keleher et al., 2010; Calvo et al., 2020). Although these results can be counterintuitive due to their positive self-representation, people with higher levels of attachment avoidance may show only an illusory positive self-evaluation and independence, which masks a fear of being refused and

abandoned by the partner (Mikulincer and Shaver, 2005). Sexual minorities with higher levels of attachment avoidance are likely to act out distancing behaviors that, within a social context characterized by refuse and poor support, can increase their social isolation and their need of closeness, and thus undermine their defensive positive self-evaluation, exposing them to the internalization of the sexual stigma (Keleher et al., 2010).

Considering these findings, it can be supposed a complex relation between romantic attachment, internalized homonegativity and IPV perpetration among lesbian women which will be explored in the current study.

Aims of the Study

The current study aims to explore the complex relation between romantic attachment, internalized homonegativity and SSIPV perpetration among lesbian women, in order to shed light on the mechanisms through which romantic attachment influences the risk of perpetrating couple violence.

The results have theoretical implications and can provide important information to prevention programs and services involved in the treatment of IPV perpetrators, which to date are scarce and not equipped to handle the complexities and specificities of this phenomenon among lesbian women (Rollè et al., 2021; Santoniccolo et al., 2021).

These findings can be of further importance considering that are drawn from the Italian population, where civil rights are still limited as well as inclusion and recognition of sexual minorities relationships. Despite the increasing acceptance of LGBT+ people and relationships, according with the "Annual review of the human rights situation of lesbian, gay, bisexual, trans and intersex people 2021" (ILGA Europe, 2021), Italy is ranked 35th out of the 49 European countries. For example, in Italy there are no laws to contrast homonegative attitudes, sexual discrimination, and hate speech. In addition, same-sex couples cannot get married or adopt children. The results of the current study can further shed light on characteristics and risk factors of SSIPV within the Italian population, where knowledges on these topic are still limited and the development of policies and interventions able to take care of the individual and relational wellbeing of LGBT+ people are needed.

According with the literature reported above (Edwards and Sylaska, 2013; Cook and Calebs, 2016; Miltz et al., 2019; Calvo et al., 2020), which suggests a complex relation between SSIPV-non-specific (i.e., romantic attachment) and SSIPV-specific risk factors (i.e., internalized homonegativity), we expect that (**Figure 1**):

H1: The relationship between romantic attachment (evaluated in both anxiety and avoidance dimensions) and SSIPV perpetration is mediated by the level of internalized homonegativity. In particular, we hypothesized that a higher level of anxiety and avoidance predicts a higher level of SSIPV perpetration and this relationship is mediated by a higher level of internalized homonegativity.

H2: Specifically, we expected that a higher level of internalized homonegativity positively mediated the relationship between romantic attachment and psychological aggression perpetration.

H3: We expected that a higher level of internalized homonegativity positively mediated the relationship between romantic attachment and physical aggression perpetration.

H4: We also expected that the relationship between romantic attachment and sexual coercion perpetration is positively mediated by internalized homonegativity.

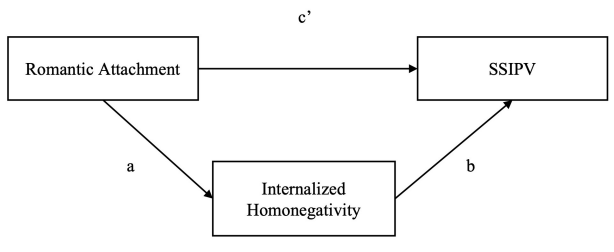

FIGURE 1 | Hypothetical model. Outcome: Perpetrated Same-Sex Intimate Partner Violence (CTS2S); Mediator: Internalized Homonegativity (MISS-L); Predictor: Anxiety and Avoidance dimensions of romantic attachment (ECR-R).

MATERIALS AND METHODS

Participants

Our sample was composed of 325 lesbian women aged 17–59 years (M = 29.62; SD = 7.4). The sample included 311 cisgender females (95.4%), 2 transgender women (0.6%) and 12 participants (3.7%) that indicated "Other" as gender. All the participants were involved in a romantic relationship that lasted from 1 year to 20 years.

The only two inclusion criteria we used were: (1) participants need to be involved in a lesbian relationship; (2) the romantic relationship in which they were involved lasted for at least 1 year.

Table 1 reports the sociodemographic characteristics of the sample.

Measures

We used the following instruments:

Intimate Partner Violence. We used the *Conflict Tactics Scale Short Form* (*CTS2S;* Straus and Douglas, 2004) to assess the level of violence within the couple. The CTS2S is the widely used instrument to assess intimate partner violence. The instrument is a self-report and consists of five different subscales: *Negotiation, Physical Assault, Psychological Aggression, Injury for Assault,* and *Sexual Coercion*, divided in *perpetrated* and *suffered* violence. The CTS2S has a total of 20 items and every item is rated using an 8-point Likert-type scale (*0 = This has never happened; 1 = Once in the past year; 2 = Twice in the past year; 3 = 3–5 times in the past year; 4 = 6–10 times in the past year; 5 = 11–20 times in the past year; 6 = More than 20 times in the past year; 7 = Not in the past year, but it did happen before*). For our research purpose, we decided to use the three subscales of Psychological Aggression (PA; e.g., item*: "I insulted or swore or*

TABLE 1 | Demographic and socioeconomic characteristics of participants.

Variable	(*N* = 325) N (%)
Age (years)	
<20	2 (0.6%)
20–29	194 (60.1%)
30–39	91 (28.2%)
40–49	31 (9.6%)
>50	5 (1.5%)
Duration of the relationship	
1 year or more	86 (26.5%)
2 years or more	67 (20.6%)
3 years or more	51 (15.6%)
4 years or more	35 (10.8%)
5–10 years	64 (19.7%)
10–15 years	16 (4.9%)
15–20 years	6 (1.9%)
Marital status	
Unmarried	198 (60.9%)
Married	3 (0.9%)
Divorced	4 (1.2%)
Civil Union	42 (12.9%)
Cohabitation	78 (24%)
Children	
Yes	127 (39.1%)
No	198 (60.9%)
Educational level	
Secondary Education	9 (2.8%)
Short-cycle Tertiary Education	8 (2.5%)
High-school degree	125 (46.2%)
University degree	150 (46.2%)
Master/doctorate or equivalent	33 (10.2%)
Economic status	
Insecure	51 (15.7%)
Sufficient	176 (54.2%)
Wealthy	98 (31.1%)
Employment status	
Self-employed	45 (13.8%)
Employed	156 (48%)
Unemployed	23 (7.1%)
Student	101 (31.1%)

shouted or yelled at my partner"), Physical Assault (PhA; e.g., item: "*I pushed, shoved, or slapped my partner*") and Sexual Coercion [SC; e.g., item: "*I used force (like hitting, holding down, or using a weapon) to make my partner have sex*"], and the CTS2S total score (labeled as "general SSIPV"), considering only violence perpetration. The total score and the three subscales were scored using Straus and Douglas (2004) scoring method for creating frequency scores.

Internalized Homonegativity. We used the *Internalized Sexual Stigma for Lesbian and Gay Men* (*MISS-LG*; Lingiardi et al., 2012) to assess homonegativity in our sample. Every item is rated using a 5-point Likert-type scale, ranging from "*Totally disagree*" to "*Totally agree*." According to Lingiardi et al. (2012), we obtained the total score by adding all the items. In our sample, the omega coefficient of the total score was 0.85, indicating a good internal consistency.

Romantic attachment. We used the *Experiences in Close Relationships questionnaire Revised* (ECR-R; Fraley et al., 2000; Italian version: Busonera et al., 2014) to assess the romantic attachment dimensions in our sample. The ECR-R consists of 36 items that measure two different dimensions of romantic attachment: *Avoidance of intimacy* and *Anxiety over abandonment*. The instrument uses a 7-point Likert-type scale (1 = *Strongly disagree*; 7 = *Strongly agree*), rating the extent to which each item describes how they usually feel and behave in romantic relationships. According to Busonera et al. (2014), we summed the score of items that composed the Avoidance scale and the Anxiety scale items separately. Our sample's omega coefficient was 0.77 for the Avoidance scale and 0.61 for the Anxiety scale.

Procedure

We used convenience sampling, and we contacted different LGBT associations to present our study to their members and ask them to participate in our research. We administered a battery of three tests to each participant, in addition to a list of questions specifically prepared to obtain general information about their sociodemographic characteristics (such as gender, age, economic status). The entire administration of the questionnaires was online through the *Qualtrics* platform during the first 6 months of 2021. At the beginning of the collection, each participant gave the authorization to use personal data and signed the written informed consent following the Italian Privacy Law n. 675/96. All the questionnaires were anonymous, and the participants were informed that they could stop participating in the study at any time. A specific mail address was created and given to participants to answer any doubts or questions. Finally, the order of the tests varied to avoid the risk of a systematic effect on the responses. All the questionnaires were digitally codified and scored based on the instructions provided by the author of each instrument.

This research did not receive any grant from funding agencies in the public, commercial, or not-for-profit sectors.

The Ethics Committee of the psychology department of Milano-Bicocca University previously approved the research project.

Data Analysis

We conducted descriptive statistics and bivariate correlations among research variables. We performed a simple regression with the adult attachment as a predictor and the level of total SSIPV perpetration as a dependent variable and a multiple regression with adult attachment and internalized homonegativity (MISS) as predictors and SSIPV as outcome to evaluate the effect of internalized homonegativity and adult attachment on SSIPV. In particular, to address the hypothesis that the general level of homonegativity would mediate the association between attachment dimensions and SSIPV perpetration, we conducted path analyses separately for anxiety and avoidance and different types of intimate violence.

In all the path analyses the predictors were the total score of internalized homonegativity and the score of anxiety and

avoidance dimensions, while the outcomes were different each time. Indeed, we performed path analyses with the total score of perpetrated SSIPV, the perpetrated psychological aggression, the perpetrated physical aggression, and the perpetrated sexual coercion as outcomes.

Multiple regression analyses were used to test whether there is a significant mediated effect, while a path analysis was subsequently conducted to visualize a general pattern of associations between all variables. Considering their association with IPV in previous studies (Rapoza and Baker, 2008; Dardis et al., 2015; Suarez et al., 2018) we also included age and duration of the relationship as confounders. Analyses were run using the statistical software IBM SPSS version 27.

RESULTS

Descriptive Statistics and Path Analysis

In our sample, the 68,9% of participants perpetrated at least one act of psychological, physical, or sexual abuse during the last year. Precisely, the 67,7% of our sample reported to have perpetrated psychological SSIPV, 14.7% physical SSIPV, and 14,1% sexual SSIPV (see **Table 2**).

Means, SDs and correlation values among variables are reported in **Table 3**.

Hypothesis 1. To address Hp 1, we firstly conducted a series of regression analyses to assess the possible mediation effect of internalized homonegativity in the relationship between romantic attachment and general SSIPV perpetration (see **Figure 1** for hypothetical model). In our sample, the results show that both the levels of attachment's anxiety and avoidance positively affect the level of SSIPV perpetration {*Anxiety:* [$F(3,319) = 1.489$, $p = 0.021$; *Avoidance*: $F(3,319) = 5.451$, $p = 0.001$]}. Analyzing the indirect effects, it seems that the level of anxious and avoidant attachment positively influences internalized homonegativity, which in turn positively influences general level of SSIPV perpetration (see **Table 4** and **Figure 2**). This result means that participants with higher levels of anxiety and/or avoidance attachment seem to have more negative attitudes toward themselves as lesbians, which in turn arise the level of SSIPV perpetration within the couple.

Hypothesis 2,3, and 4. To better understand this association, we performed six different multivariate regression models depending on romantic attachment dimensions and IPV categories. We tested different series of regression analyses, including as predictors: (a) the *avoidance* dimension of romantic attachment (ECR-R's Avoidance of Intimacy total score), and (b) the *anxiety* dimension (ECR-R's Anxiety to separation total score), as mediator the general level of internalized sexual stigma (Total score of MISS-L), and as outcomes (a) the *psychological aggression* perpetration among partners (Total score of the CTS2S perpetrated psychological aggression subscale), (b) the *physical assault* perpetration among partners (Total score of the CTS2S perpetrated physical assault subscale), and (c) the *sexual coercion* perpetration among partners (Total score of the CTS2S perpetrated sexual coercion subscale).

Our results reveal that the level of internalized homonegativity seems to positively mediate the relationship between romantic

TABLE 2 | SSIPV frequencies.

Variable	
General SSIPV	
At least one act of violence perpetrated	224 (68.9%)
Perpetrated Psychological Aggression	
Once in the past year	67 (20.7%)
Twice in the past year	81 (24.9 %)
3-5 times in the past year	50 (15.4%)
6-10 times in the past year	17 (5.2%)
11-20 times in the past year	4 (1.2%)
More than 20 times in the past year	1 (0.3%)
Perpetrated Physical Assault	
Once in the past year	33 (10.1%)
Twice in the past year	11 (3.4%)
3-5 times in the past year	4 (1.2%)
Perpetrated Sexual Coercion	
Once in the past year	28 (8.6%)
Twice in the past year	18 (5.5%)

TABLE 3 | Descriptive statistics and bivariate correlations.

	Mean (SD)	1	2	3	4	5	6
1. Attachment Avoidance	2.62 (0.62)	–	–	–	–	–	–
2. Attachment Anxiety	3.49 (0.52)	0.307**	–	–	–	–	–
3. Internalized Homonegativity	1.39 (0.42)	0.323**	0.172**	–	–	–	–
4. General SSIPV	3.28 (3.55)	0.219**	0.127*	0.195**	–	–	–
5. Psychological SSIPV	2.63 (2.43)	0.215**	0.147**	0.206**	0.891**	–	–
6. Physical SSIPV	0.30 (1.00)	0.181**	0.019	0.131*	0.741**	0.470**	–
7. Sexual SSIPV	0.35 (1.07)	0.069	0.069	0.300	0.602**	0.249**	0.457**

*$p < 0.05$, **$p < 0.001$.

TABLE 4 | Defined parameters.

	General SSIPV perpetration as outcome*			Psychological SSIPV perpetration as outcome*		
	ß	p	R-square	ß	p	R-square
Anxiety						
Direct effect	0.586			0.507		
Total effect	0.749	0.036	0.030	0.625	0.011	0.041
Avoidance						
Direct effect	1.006			0.655		
Total effect	1.237	<0.001	0.051	0.843	<0.001	0.054

*Internalized homonegativity as the mediator and age and duration of relationship as cofounders.

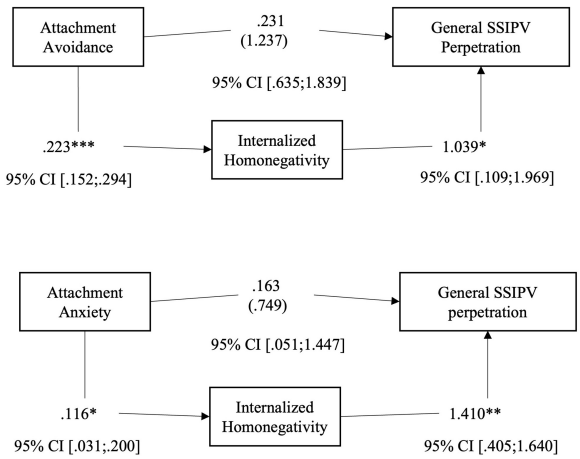

FIGURE 2 | Hp.1. Path analysis with Total score of Perpetrated SSIPV as the outcome, Total score of MISS as the mediator, and the score of Anxiety and Avoidance dimensions as the predictors. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

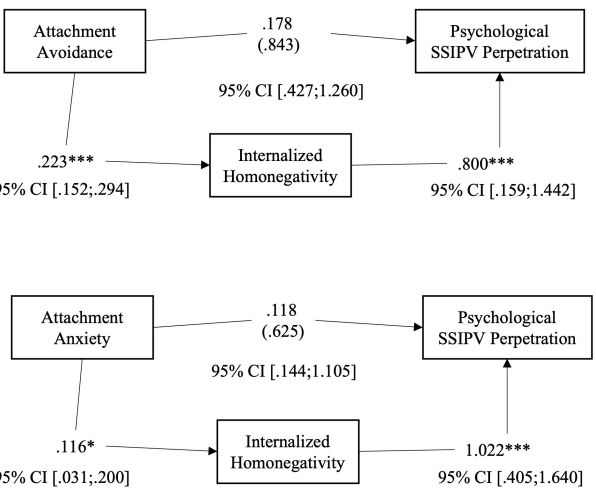

FIGURE 3 | Hp. 2 Path analysis with the score of perpetrated Psychological Aggression as the outcome; the total score of MISS as the mediator, and the score of anxiety and avoidance as the predictors. *$p < 0.05$; ***$p < 0.001$.

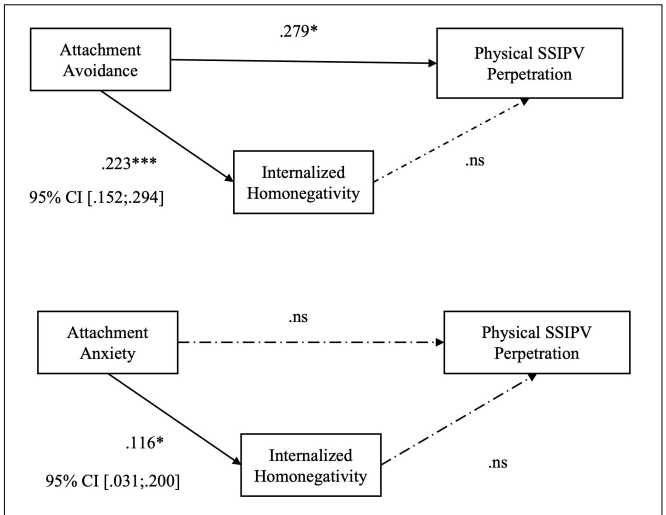

FIGURE 4 | Hp. 3 Path analysis with the score of perpetrated Physical Aggression as the outcome; the total score of MISS as the mediator, and the score of anxiety and avoidance as the predictors. *$p < 0.05$; ***$p < 0.001$. ns: not significant.

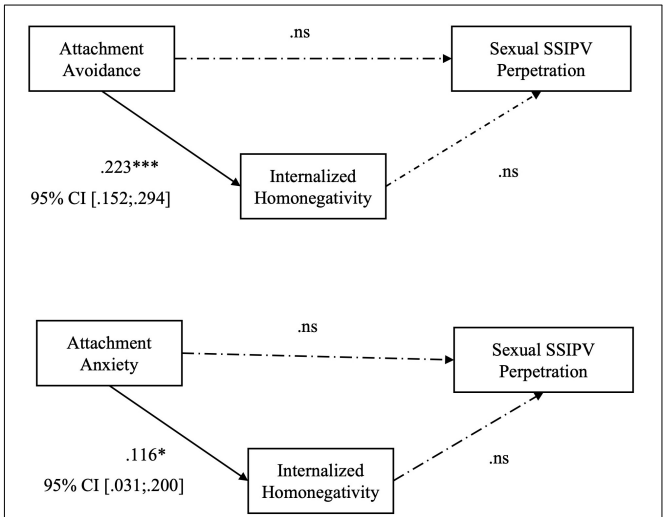

FIGURE 5 | Hp. 4 Path analysis with the score of perpetrated Sexual coercion as the outcome, the total score of MISS as the mediator, and the score of anxiety and avoidance as the predictors. *$p < 0.05$; ***$p < 0.001$. ns: not significant.

attachment (both avoidance and anxiety) and psychological SSIPV perpetration (Hp. 2): higher levels of attachment avoidance ($B = 0.223$; $p < 0.001$), or anxiety ($B = 0.116$; p = 0.007) predicted higher levels of internalized homophobia, that in turn influences the level of psychological SSIPV perpetration within the couple (see **Table 4** and **Figure 3**). The level of internalized homonegativity seems not to fully mediate the relationship between romantic attachment and physical assault (Hp. 3; see **Figure 4**) and sexual coercion (Hp. 4; **Figure 5**). More specifically, to test hypothesis 3, firstly we conducted two series of regressions depending on predictors (avoidance or anxiety). The first step was to test the relationship between avoidance attachment as predictor and physical assault perpetration as outcome. The result highlighted that the relationship was statistically significant: participants with higher level of attachment avoidance seemed to be more physically violent with their partners ($B = 0.279$; $p < 0.005$). Secondly, we conducted a regression using the level of avoidance dimension as predictor and the level of internalized homonegativity as outcome. Also in this case, the relationship was statistically significant: in our sample higher levels of avoidance predicts higher levels of internalized homonegativity ($B = 0.223$; $p < 0.001$). Finally, to test the mediation model, we run a regression with the avoidance dimension of attachment and the level of internalized homonegativity as predictors and the physical assault SSIPV

score as outcome. The results underlined that this relationship was not statistically significant. Using the Sobel test to test the significance of the mediation model, the result suggested that the internalized homonegativity seemed not to mediate the relationship between attachment avoidance and physical assault SSIPV perpetration (Sobel test = 1.15, p = n.s) (see **Figure 3**).

We also tested the relationship between anxious attachment (as predictor) and physical SSIPV (as outcome). The results suggested that the direct association between variables was not statistically significant (see **Figure 3**). Then, we conducted a second regression using the level of attachment anxiety as predictor and the internalized homonegativity as outcome. Results revealed that the relationship was statistically significant: higher levels of anxiety predict higher level of internalized homonegativity (B = 0.116; p = 0.007). To test the mediation model, we used attachment anxiety and internalized homonegativity as predictors and physical SSIPV as outcome. Results underlined that the association between these variables was not statistically significant. Sobel test (test = 0.26, p = n.s) confirmed that the internalized homonegativity did not partially or fully mediate the association between anxiety attachment and physical SSIPV (see **Figure 3**).

To test Hypothesis 4 (Sexual SSIPV) we used a series of regressions. We first run a regression with the avoidance dimension of attachment as predictor and the sexual SSIPV as outcome. The results suggested that the relationship was not statistically significant. Then, we conducted a regression with attachment avoidance as predictor and internalized homonegativity as outcome. In this case the association was statistically significant: as seen before, higher level of avoidance predicts higher levels of internalized homonegativity (B = 0.223; $p < 0.001$). Finally, we run a regression with attachment avoidance and internalized homonegativity as predictors and sexual SSIPV as outcome. The results revealed that the relationship between variables was not statistically significant. Sobel test (test = 0.74, p = n.s.) confirmed that internalized homonegativity seemed not to fully or partially mediate the relationship between avoidance dimension of attachment and sexual SSIPV.

We also tested the same model using anxious attachment as predictor. The results suggested that anxious attachment did not have a direct effect on sexual SSIPV but had a positive effect on the internalized homonegativity (B = 0.116; p = 0.007). Finally, to test the mediation effect of internalized homonegativity in this relationship, we used a regression with level of attachment anxiety and internalized homonegativity as predictors and sexual SSIPV as outcome. The association between variables was not statistically significant and the Sobel test (test = 0.56, p = n.s.) confirmed that the level of internalized homonegativity seemed neither fully nor partially mediate the relationship between anxious attachment and sexual SSIPV.

DISCUSSION

The current paper explored SSIPV perpetration prevalence among lesbian women and associated factors in Italy, where only few studies have been conducted to date on this topic. Furthermore, it extends current knowledge on couple violence among lesbian women, exploring mechanisms through which romantic attachment influences SSIPV perpetration and its relationship with SSIPV-specific risk factors (i.e., internalized homonegativity).

In our sample, the 68,9% of the lesbian women perpetrated at least one act of psychological, physical, or sexual abuse. More specifically, the 67,7% reported to have perpetrated psychological SSIPV, 14,8% physical SSIPV, and 14,2% sexual SSIPV. Our results are in line with the literature on SSIPV perpetration among lesbian women (see Badenes-Ribera et al. (2016) for a meta-analysis), although methodological differences (e.g., definition of IPV, assessment tools, recall period, characteristics of the sample) can make it difficult to compare data between studies (Rollè et al., 2018). Furthermore, our prevalence rate can be underestimated due to socio-cultural reasons. Indeed, although several sexual minorities' civil rights are now recognized in Italy, others are still not guaranteed (e.g., marriage, adoption, laws against homonegative hate behaviors), testifying the persistence of heterosexist attitudes (Calvo et al., 2020; ILGA Europe, 2021). Social homonegativity and sexual stigma which seem to persist in Italy, intertwined with the stigma related with the perpetration of SSIPV, can have limited the disclosure of participants' actual behaviors, affecting our results.

The influence of romantic attachment on IPV among lesbian women, differed according with the form of violence considered. Specifically, attachment anxiety was directly and independently associated with general and psychological SSIPV perpetration. Similarly, attachment avoidance was directly and independently associated with general, psychological, and physical SSIPV perpetration. These results are in line with a large body of literature on both heterosexual people and sexual minorities (Bartholomew et al., 2008; Derlega et al., 2011; Gabbay and Lafontaine, 2017a,b; Velotti et al., 2018).

In contrast, attachment anxiety was not associated with physical SSIPV, and neither attachment anxiety nor attachment avoidance were associated with sexual SSIPV. The low prevalence of these forms of couple violence in our sample and the use of the short form of the CTS2 can have contributed to these results.

In addition, and more important, our study identified a partial mediation of internalized homonegativity on the association between romantic attachment and, general and psychological SSIPV perpetration. Specifically, attachment anxiety and avoidance were positively associated with internalized homonegativity, which in turn, was positively related with general and psychological SSIPV perpetration.

The results support, at least in part, the conception of violence proposed by attachment theory, demonstrating an association between romantic attachment and perpetration of couple violence. From this perspective, participants with high levels of attachment anxiety or avoidance seem to resort to violent behaviors as a dysfunctional mechanism of

emotion and distance regulation to the partner (Mikulincer and Shaver, 2005; Allison et al., 2007; Bartholomew et al., 2008; Gabbay and Lafontaine, 2017a).

Furthermore, our results expand these hypotheses, highlighting how attachment anxiety and avoidance, and associated self-other representations, contribute to the internalization of the sexual stigma and thus to negative attitudes and affect toward one's sexual identity, which in turn promote SSIPV perpetration. According with a psychodynamic conception of violence (Asen and Fonagy, 2017; Fonagy, 1999; Glasser, 1998; Yakeley, 2018), we can suppose that these unbearable negative affect toward the self, to which people with an insecure attachment are vulnerable, are regulated through pre-mentalistic strategies (resorting to violent behaviors) rather than through functional emotion regulation mechanisms. The results found by the application of the Psychological Mediation Framework (Hatzenbuehler, 2009), which demonstrated the mediational role of emotional regulation in the relation between minority stress and several dimensions of sexual minorities' wellbeing (e.g., anxiety, depression, substance abuse) seem to further support these hypotheses.

However, it is necessary to clarify that our results were significant only in reference to general and psychological SSIPV perpetration, while they were not confirmed in relation to physical or sexual violence.

LIMITATIONS

The current study has several limitations. First, it has a cross-sectional design which does not allow to draw firm conclusion regarding the causal direction of the associations found. Second, only self-report measures were administered in the study, and the use of the short form of the CTS can have contributed to an underestimation of the SSIPV prevalence as well as the lack of items able to detect SSIPV-related abusive tactics (e.g., threats of outing and homonegative attitudes toward the partner). Third, only lesbian women were included in the study, while other sexual minorities were not considered. In addition, considering our focus was on sexual orientation rather than on gender identity, we included also 15 participants who were not cisgender. However, no separate data were obtained on this specific group, due to the low number of participants included.

Finally, data collection was conducted during the last 6 months of 2021, when in Italy COVID-19 was still ongoing, impacting psychological and relational wellbeing, although social restriction started to lift.

FUTURE DIRECTIONS

The current study highlights the role of romantic attachment and internalized homonegativity on SSIPV perpetrations in lesbian women. However, other studies are needed to confirm these results among other sexual identities. To make efforts to recruit representative sample can increase the generalizability of the findings emerged. Longitudinal studies are needed to confirm the causal direction here hypothesized.

Furthermore, to include other forms of violence in future studies, such as coercive control or technology-related violence, can expand our knowledge on the influence of romantic attachment and internalized homonegativity on violent behaviors.

Impact of COVID-19 pandemic and its moderating role in relation to psychological variables and SSIPV should be addressed in future studies.

In addition, future studies should assess romantic attachment through semi-structured interview in order to explore deeper representations of adult attachment bonds and their association with SSIPV. Finally, to explore the role of emotion regulation mechanisms in the association between romantic attachment, internalized homonegativity, and SSIPV perpetration, can further shed light on the results found and the theoretical considerations proposed in the current study, providing information at a clinical level.

CONCLUSION

Considering the negative consequence related with SSIPV psychological victimization (e.g., Robinson, 2002; Bartholomew et al., 2008; Strickler and Drew, 2015) and its association with other forms of violence (Chong et al., 2013; Finneran and Stephenson, 2014; Wei et al., 2020), the results found provide important information at a clinical level. In order to develop interventions tailored to SSIPV perpetrators and able to reduce relapses, data highlight the need to focus on negative representations of the self, and in particular on those related with one's sexual identity, promoting functional mechanisms of regulation of negative emotions related with the internalization of the sexual stigma. These negative representations and the associated affect, seem to flourish among people with high levels of attachment anxiety or avoidance and contribute to SSIPV perpetration as a dysfunctional mechanism of emotion regulation.

In addition, improving care providers knowledges about SSIPV, its prevalence, risk factors and specificities according with evidence-based data, can facilitate access to services for both victims and perpetrators, reducing re-victimization and further traumatic experiences. Formal sources of support are nowadays scarce and the help seeking process is still limited. This is mainly due to homonegative attitudes and a heteronormative conception of couple violence as well as by a lack of professional skills able to take care of the complexities experienced by sexual minorities victims and perpetrators of SSIPV, which seem to be further complicated by sexual stigma and minority stressors.

Accordingly, to intervene with the aim to decrease the structural stigma toward sexual minorities, to date ongoing in many societies and particularly in Italy (ILGA Europe, 2021), seems necessary in order to prevent SSIPV perpetration and promote sexual minorities' wellbeing.

DATA AVAILABILITY STATEMENT

The data analyzed in this study is subject to the following licenses/restrictions: The dataset is still used for other papers. Requests to access these datasets should be directed to TT, tommaso.trombetta@unito.it.

ETHICS STATEMENT

The current study involving human participants was reviewed and approved by the Ethics Committee of the Psychology Department of Milano-Bicocca University. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

GT, TT, AS, and LR: creation of the frame used in the study and research design. GT and LG: data analysis. GT, TT, LG, SR, AS, and LR: interpretation of the results. SR, AS, and LR: supervision of the entire work. All authors were involved in the discussion, writing and revision of the manuscript, and they gave the final approval of the version to be published.

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Prisoners' Perceived Violence and Hair Regulation in Hong Kong Prisons: Gender-Based Differences

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Hair regulation is an essential policy for maintaining hygiene, security, and discipline in correctional institutions. However, the implementation of any hair-regulating policy should include a consideration of gender needs and differences. This study investigated Chinese prisoners' perceived influence of hairstyles on their behavioral responses. Data were collected by means of a self-administered questionnaire survey from 500 male and 500 female prisoners in 11 correctional institutions of Hong Kong, China. Descriptive analyses and chi-square tests were used to explore the perceived violence of prisoners and gender differences. Mediation analysis was adopted to examine the prisoners' perceived behavioral responses and mental and psychological well-being under different hairstyle situations, using self-esteem, procedural fairness, and negative emotional responses as mediators. The study found that male prisoners are inherently more tensive than the female group in terms of violent proclivities. In addition, perceived violent behavior is associated with hairstyle, and the influence path is gender related. Restrictive hair regulations that do not address unique social and cultural meanings and gender differences would decrease male prisoners' self-esteem, while increasing all prisoners' negative emotional responses and reducing their perceived procedural fairness. To maintain security inside institutions, we recommend short hair for male prisoners and long hair for female prisoners in Chinese prisons. Given that many prisons in Asian and African nations have an authoritarian style of governance similar to that of China, this study is of considerable international relevance.

Keywords: hair regulation, gender, violence, self-esteem, procedural fairness, negative emotion, prison, Hong Kong

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INTRODUCTION

The purpose of haircutting requirements in correctional institutions is to maintain prison hygiene, security, and discipline. As long hair can be used to aid attacking tactics against other inmates, and for committing suicide or concealing prohibited items, it could cause severe security concerns for prisons. In Hong Kong prisons, in order to maintain a secular, humane, and healthy prison environment, it is necessary to have such haircutting requirements listed in prison regulation "SO41-05" based on security issues, whereby male prisoners are required to cut their hair short, but the same is not the case for their female counterparts. However, it was held by a Hong Kong

court (case HCAL 109/2014) that SO41-05 constituted sex discrimination, and the requirement of SO41-05 is therefore unlawful. There are no legitimate reasons to explain the inapplicability of the haircutting requirement in female prisons, as the security concern should also be applied to female prisoners. The court judgment has suggested that differences in treatment must only be justified when there is a legitimate, rational, and necessary aim to guarantee equality. If it is necessary to maintain prison security and to safeguard prisoners' human rights, the same haircutting requirement should be applied to both male and female prisoners in a non-discriminatory way. That is, the issue is not about haircutting that violates human rights in correctional institutions but rather the selective requirement for male prisoners, but not female prisoners, to cut their hair short, which constitutes direct sex discrimination.

Against this backdrop, the present study was carried out with the objective to investigate the haircutting concerns from a perspective of gender differences. In particular, it assessed the security risks associated with different hairstyles of prisoners, with regard to the possibility of prisoners' proclivity to violence and any other factors pertinent to these individuals' mental and psychological well-being.

LITERATURE REVIEW

Cultural Meanings of Hairstyles and Gender Identity

Hair is a powerful agent to symbolize individual and group identity, gender, and sexuality, and a means of self-expression and communication (Ruberg, 2019). From a postmodernist perspective, hair symbolizes one's self (Synnott, 1987; Fabry, 2016) as well as the borders of one's body (Holton, 2020). Hair is regarded as "a tool through which discourses of power, control and authority are inscribed upon, encountered by and used against bodies in space" (Holton, 2020, p. 560). Hair is a key agent in producing and representing the body, specifically through the hairstyle that influences and transcends its margins (Holton, 2020). Hairstyles can influence judgments on the morality, sexuality, religiosity, and political persuasion of a person.

Although hair is a powerful symbol of individual identity with immense social significance, identity issues are universally different between men and women. As Stenn (2016) stated, universally and culturally women have longer hair than men. Extra time, wealth, and care are needed to keep long hair healthy. Consequently, long hair can be a status symbol (Stenn, 2016). Women's long hair is also associated with femininity and facial attractiveness and is expected from women in regard to health status (Mesko and Bereczkei, 2004). By looking at perceptions with regard to different hair colors and lengths, Manning (2010) suggested that women who have short hair are believed to be less feminine than other women, as short hair is culturally assigned to men. In Chinese societies, long hair is also regarded as a sign of femininity and the physical attractiveness of young women (Zheng, 2016). From a social control perspective, long hair always means social regulation and obedience under religious or cultural conformity, while short hair in Chinese women could be signified as social freedom or defiance (Hiltebeitel and Miller, 1998; Zheng, 2016). Similarly, Weitz (2001) contended that short hair in United States women could be assigned a liberating meaning, signifying power and a feeling of beating the system.

On the other hand, short hair and shaven faces are symbolic of normative and morally upright males in the culture of mainstream Christianity (Singh, 1997). A good-mannered and cultural model of men would be with neat and tidy hair, and a clean and classic appearance (Hirschman and Brunswick, 2002). Hairstyles can also serve as a symbol of individual identity. Two studies by Leach (1958) and Hallpike (1969), anthropologists who studied the cultural meanings of men's hair, argued that long hair is not merely a symbol of sexuality but also a symbol of being outside society and under less social control than other citizens. For example, it was found that long hair could mean independence and less recognizing of authority than short hair among male college students (Larsen and White, 1974). While gang violence (Melde and Esbensen, 2013) is always a concern in criminology and prison studies, Schneider (2004) contended that hairstyles were used by gangs in men's prisons to maintain their group identity. He argued that short hair is the most universally recognizable hairstyle for gang identity and can also be an effective way to signify gang affiliation. These studies have shown that hairstyles do have cultural meanings in gender identity which are significantly different between men and women. Hairstyles have a unique role in gender perception to distinguish between men and women.

Gender and Prison Violence

Prison violence has been associated with different factors (Sanhueza et al., 2021). One factor relates to prison management, such as poor staff–prisoner ratios, unfair treatment of prisoners, corruption, and deprived conditions inside prisons (Butler et al., 2021). Another factor relates to personal issues, such as prisoners' psychological traits, mental health (Butler et al., 2021), offending records, and drug history (Celinska and Sung, 2014). Additionally, there are sociological aspects, such as prisoners' responses to social discrimination (Bell, 2017). Finally, there are criminological aspects, such as gang-associated conflicts and fight for power and hierarchy in prison, as prison violence is more common among gang members incarcerated in men's prisons (Fleisher and Decker, 2001; Gaes et al., 2002).

Gender as a variable in prison violence is not frequently studied in comparative research on men and women in custody. Hence, the results remain inconclusive. Some studies found that there is no significant effect of gender on prison violence (Bell and Lindekugel, 2015; Warren et al., 2018). Others suggested that violence is more common in men's prisons compared to women's prisons, and especially that instances of sexual violence (Wolff et al., 2007) and serious violence are much less common in women's prisons (Craddock, 1996; Wulf-Ludden, 2013). Research has also revealed that men in prison are more prone to violence than are women (Sorensen and Cunningham, 2010; Wulf-Ludden, 2013). Other research, however, indicates that female prisoners can be as violent and conflict-laden as their counterparts in male correctional facilities, especially regarding low-level physical assaults (Wolff et al., 2007), and that women's

self-reported violence is significantly higher than figures recorded by institutions (Warren et al., 2018).

Prisons, like many other authoritarian institutions, illustrate gender relations that reflect the gender regime of a given institution. Although prisons are often single-gender institutions, they still are characterized by ideas of masculinity and femininity as in mixed-gender institutions. The gender relations encompass various practices that reflect definitions of masculinity and femininity, sexual divisions of labor, and other sexual ideologies that outline appropriate sexual behavior (Gorga, 2017). Studies on men's prisons provide examples of gender hierarchies among prisoners: hyper-masculine men often are positioned at the top of the power hierarchy, while feminine (i.e., small and weak) men are often at the bottom (Donaldson, 2001; Hensley et al., 2003).

Women's prisons also share a similar subculture as men's prisons (Gorga, 2017). Women labeled as "studs" are those with masculine hairstyle and appearance, often presenting as men to exploit and control feminine prisoners for personal advantage, such as special service or financial support (Gorga, 2017). Prison staff also indirectly produce gender differences inside the institutions (Britton, 2003), causing unfairness to those female prisoners with more masculine traits, such that the studs are subjected to more surveillance and scrutiny by the staff, because they may cause more trouble and misconduct. Thus, the prisoners' physical appearance of masculinity and femininity contributes to shaping gender hierarchy and possibly causes gender exploitation in women's prisons.

When examining factors in relation to gender differences in prison violence, Thomson et al. (2019) suggest that affective psychopathic traits explain the violence of female prisoners, regardless of impulsivity. In addition, there are other predictive factors on female prisoners' misconduct and violence, such as level of social support (Celinska and Sung, 2014). For male prisoners, masculinity or "doing-gender" (using violence to express gender identity), and using violence to compete for power and resources, are the dominant explanations of violence in men's prisons (Michalski, 2017).

Hair Regulation and Gender Concerns in Prisons

Restrictive hair regulations in prisons are mainly based on four justifications: hygiene, workplace safety, prisoners' identification, and prison security. The first reason is to avoid skin and louse infection and to reduce the difficulties of identifying possible skin disorders. Maintaining prisoner cleanliness with short hair and shaving helps to minimize the costs of bathing and the plumbing maintenance costs that may be caused by clogs and backups. Second, for prisoners who may need to work in food service and with industrial machinery, short hair can ensure hygiene and safety. It can also reduce the chances of conflict between staff and prisoners when requiring them to wear a face guard or a hair net. Third, short hair and a shaved face can clarify facial characteristics for prisoner identification. Restrictive hair regulations can help administrators to quickly identify prisoners and prevent them from hiding facial characteristics. Finally, regulating long hair can reduce the chance of concealing contraband and thus minimize the additional efforts of prison staff to search for contraband. Long hair can also be used in fighting tactics when violence occurs (Singh, 1997); for example, long hair can prompt attackers to pull an opponent's hair (Tjaden and Thoennes, 1998; Rippon, 2000).

As hair symbolizes one's identity, forced haircutting is strongly connected to shame. For male prisoners, haircutting can have a special meaning that they have become separated from their previous life and people with whom they were associated prior to imprisonment. Indeed, their identities are changed to match previously admitted prisoners (Serico, 2015). Cutting hair, and especially shaving the heads of convicts, could signify their conviction and the subsequent life under rigid discipline and loss of freedom as a form of punishment (Hirschman and Brunswick, 2002).

Historically, hair shearing has unique meaning for women. It can be regarded as a form of shame and desexualization, intended to take away women's dignity (Warring, 2006) and representing a symbolic castration. That is, their sexual identity is taken away, thus diminishing their power of physical attractiveness. Restrictive hair regulations exploit women's agency in aesthetic choices, limiting their ability to "do gender" (engage in actions that are subject to evaluation by others as being appropriate for a woman) and to maintain and express one's self in both public and private spheres (Holton, 2020). Mandatory hair regulations, especially cutting women's hair without their consent and acceptance, can be seen as destroying the woman's self.

From this perspective, cutting female prisoners' hair on an involuntary basis can be regarded as disciplining the body and imposing "secondary punishment" to the convicted (Ruberg, 2019). Restrictive hair regulations in women's prisons cause a continual affront to the female prisoners' self-esteem. For the majority, hair signifies their dignity, and cutting their hair and prohibiting them from maintaining hair rituals are regarded as a more severe form of punishment than incarceration. When hair becomes a critical claim to self-esteem, the restriction and control over hair during incarceration can be regarded as a form of bodily violence against female prisoners (Labotka, 2014).

Another study on regulating women's hair has supported this perspective. A study of restrictive haircuts among newly recruited female police officers revealed that the women regarded cutting their hair as the loss of agency, hence having an impact on their perceived self-image. They expressed an impact on their personal lives, including on relationships with significant others, as they no longer embody their former selves when they return to their private lives (Kringen and Novich, 2018).

To summarize, the literature suggests that hairstyles have unique social and cultural meanings for both men and women. Culturally women have long hair and men short. There are gender differences in prison violence. While male prisoners' violence is mainly related to power and resources and the maintenance of a masculine identity, female prisoners tend to commit less serious violence, which is often caused by emotional and affective responses and the lack of social support. While there are legitimate reasons for correctional institutions to implement

restrictive hair regulations, such policies may serve as another type of punishment or violence against the prisoners.

RESEARCH METHODOLOGY

Objectives

There is no preexisting research that has investigated how hairstyles impact violence in Chinese prisons, including its gender differences and mediating factors. Against this backdrop, the present study aimed to investigate haircutting concerns in terms of Chinese prisoners' perceptions of violence. In particular, it assessed the security risks associated with different hairstyles of male and female prisoners in Chinese prisons, in regard to their proclivity to violence and any other factors pertinent to their social, mental, and psychological well-being. These factors include the prisoners' sense of procedural fairness, negative emotional consequences, and self-esteem.

Participants and Data-Collection Procedures

After ethical approval was sought from the institution, a pilot study was conducted. Four focus groups were held with 20 male and 20 female correctional officers to solicit opinions on the daily operations, security control, and violence risks in correctional institutions. Moreover, we interviewed three male and two female ex-prisoners identified through our own research network to collect the same kind of information. The pilot study aimed to collect firsthand material to facilitate the construction of a survey questionnaire for the main study. Each focus group and interview lasted about 80 min, and the data were transcribed by research assistants. The transcription was validated by a researcher who conducted the group or interview. After the transcription was confirmed, thematic analysis was conducted through the following steps: (1) familiarizing with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, and (5) defining and naming themes (Braun and Clarke, 2006). Eventually, we identified the following themes for the construction of the questionnaire: (1) aggression, (2) individual violence, (3) negative emotional responses, (4) procedural fairness, (5) self-esteem, and (6) the use of weapons in prison violence.

The main study was conducted between December 2017 and January 2018, using purposive sampling. With the help of the Correctional Services Department of Hong Kong, we sent out invitations to recruit 500 male prisoners and 500 female prisoners who were imprisoned in 11 correctional institutions. The number of participants recruited was proportional to the population size of the correctional institutions. The breakdown of the number of participants from each institution is shown in **Table 1**. Participants participated in the study on a voluntary basis without any incentive after giving informed consent. They were released from their daily work routines and organized into small groups in a comfortable room. With the assistance of prison staff, a research assistant randomly distributed one of the two versions (long or short hair) of the questionnaire and a consent form to each participant. They read and signed the consent form, which explained the study's confidentiality and anonymity, before they proceeded to answer the questions on their own. For those who had queries on the questions, the research assistant provided guidance. Participants were also assured that they were free to withdraw from the study at any time. The following measures were adopted to ensure the anonymity and confidentiality of the participants' responses: the questionnaires were anonymous, that is, respondents were not required to fill in their names, and there were no items that could identify them; the questionnaires were self-administered, without any discussion with other participants or staff; and upon completion, the questionnaires were put into envelopes provided by the research team and collected by the research assistant.

Materials and Measurements

There were two different versions of the questionnaire. All questions and statements were identical in both versions except for the scenario section. The scenario section in version A asked participants to imagine themselves retaining ear-length hair (hereafter "short" for simplicity, see **Figure 1** for the hairstyles) during their custodial sentence and version B asked participants to imagine themselves retaining shoulder-length hair (hereafter "long" for simplicity) during their custodial sentence.

Moreover, the study adopted the following scales and items to assess aggression, observations of prison violence, self-esteem, procedural fairness, negative emotional responses and violent expressive behavior.

Aggression

We adapted the Chinese version of the Reactive-Proactive Aggression Questionnaire (RPAQ; Fung et al., 2009) to assess participants' reactive and proactive aggression. Proactive aggression is described as "purposeful behavior aimed at gaining a reward of social dominance over others," whereas reactive aggression is a "response to provocation or a perceived threat" (Fung et al., 2009, p. 473). The original RPAQ contains 23 behavioral items to be self-reported on a three-point scale, with 0 = never, 1 = sometimes, and 2 = often. After the pilot study with correctional institution staff, we dropped two items

TABLE 1 | Number of participants.

	Male	Female
• Male prison 1	162	/
• Male prison 2	86	/
• Male prison 3	52	/
• Male prison 4	52	/
• Male prison 5	46	/
• Male prison 6	36	/
• Male prison 7	36	/
• Male prison 8	30	/
• Female prison 1	/	356
• Female prison 2	/	102
• Female prison 3	/	42
Total	500	500

FIGURE 1 | Hair style used in long hair vs. short hair scenarios.

(namely "made obscene phone calls for fun" and "vandalized something for fun") and modified the wordings of the remaining 21 items to better suit the adult prison population. Examples of our modifications include modifying the original item "used force to obtain money or things from others" to "used force to obtain cigarettes or drinks from others." In our modified Aggression scale, 11 items assess reactive aggression (e.g., got angry when others threatened you) and 10 items assess proactive regression (e.g., had fights with others to show who was on top). Points are summated to form scores of reactive regression (max score = 22), proactive regression (max score = 20), and overall total aggression (max score = 42). The Cronbach's alphas for proactive regression, reactive regression and total aggression are 0.96, 0.94 and 0.97, respectively.

Observations of Prison Violence

These questions were self-constructed by the research team. We asked participants to indicate their observations of prison violence and the use of weapons inside correctional institutions. An example of the questions and statements is "From what you see, prisoners frequently use the following tools/weapons in fights" (see **Table 3**). Questions on prisoners' observation of common scenarios were constructed to reflect the situations of conflicts, confrontations, revenge seeking and use of violence to deal with conflicts inside correctional institutions (see **Table 4**).

Self-Esteem

We aimed to assess the effects of long and short hair lengths on a prisoner's self-esteem. After informing participants, via the questionnaire, that they would be required to retain a certain hair length during their custodial sentence (long or short, depending on questionnaire version), we asked them to rate their agreement on nine self-esteem items. To assess participants' level of self-esteem, we translated the Rosenberg Self-Esteem Scale (Rosenberg, 1965) into Chinese and then back-translated it to confirm its original meaning. One item ("I wish I could have more respect for myself") was dropped because of low consistency with the other items. The nine items we included in the present study are "I feel that I have a number of good qualities," "I take a positive attitude toward myself," "I feel that I am no good at all," "I feel that I am a person of worth, at least on an equal plane with others," "I would be inclined to feel that I am a failure," "I feel that I am able to do things as well as most other people," "I feel that I do not have much to be proud of," "I feel useless" and "I am satisfied with myself." Participants rated these items using a four-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). The Cronbach's alpha for the self-esteem scale is 0.88.

Procedural Fairness

We wanted to assess the effects of long and short hair lengths on a prisoner's perception of the procedural fairness of correctional institutions (CI). We translated and adapted the procedural fairness scale from Reisig and Mesko (2009). We dropped the item "The guards are courteous to inmates" because the emphasis of commands in CIs is often at odds with courtesy. The five items we used are "CI staff treat prisoners with respect," "CI staff treat prisoners fairly," "CI staff explain their decisions to prisoners," "CI staff make decisions based on facts and not personal opinions" and "CI staff take the time to listen to prisoners." Participants were asked if the hair length requirement would be enforced, what is their perception toward CI staff maintaining procedural fairness. Participants rated the survey items using a four-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). The Cronbach's alpha of the procedural fairness scale is 0.95.

Negative Emotional Responses

We assessed the extent to which long and short hair lengths arouse prisoner's negative emotional responses. We constructed a six-item scale assessing participants' negative emotional responses. Participants were asked if the hair length requirement would be enforced and their emotional response. They rated their feelings of being disrespected, inferiority, furiousness, bitterness, anxiety and sadness on a five-point scale, with 0 meaning a lack of such feeling and 4 meaning a strong feeling. The Cronbach's alpha of the negative emotional responses scale is 0.98.

Violent Expressive Behavior (Outcome Variable)

Participants were asked to indicate the possibility of them harming themselves, throwing things, hitting others, pulling other's hair and threatening/swearing at others on a three-point scale if their hair was required to be a certain length (long vs. short), with 0 = certainly not, 1 = maybe, and 2 = certainly (see **Tables 7**, **8**). These five items were selected based on the information obtained from four focus groups with prison staff and five interviews with ex-prisoners. The Cronbach's alpha of violent expressive behavior scale is 0.94.

TABLE 2 | Demographics.

	Male (*N* = 500)	Female (*N* = 500)
Age	%	%
21–30	27.0	25.0
31–40	33.4	38.0
41–50	22.4	29.6
51–60	12.8	5.7
61 or above	4.2	1.6
Highest level of education obtained		
Primary school or below (grade 6 or below)	15.3	21.4
Middle school (grades 7 to 9)	41.7	41.1
High school (grades 10 to 11)	29.2	25.9
Matriculation (grades 12 to 13)	4.4	3.5
Post-secondary certificate or community college	3.0	4.5
Bachelor degree or above	4.6	2.9
N.A./others	1.6	0.8
Marital status		
Married with children	32.3	38.7
Married with no children	10.0	17.4
In a relationship	10.7	13.8
Single	44.1	25.8
N.A./others	3.0	4.3
Nationality/permanent residency		
China/Taiwan/Macau/Hong Kong	80.6	78.4
Others	19.4	21.6
Religion		
No, I am not religious	64.7	65.4
Yes, I am religious	35.3	34.6
Principal offenses charged		
Possession/trafficking/manufacturing of drugs	53.8	27.4
Theft	14.2	16.8
Deception	6.6	9.4
Robbery	3.8	0.6
Wounding/assault	3.8	0.8
Rape or indecent assault	1.6	0
Blackmail	0.8	0
Murder	1.6	0
Burglary	3.8	1.2
Domestic violence	0	0.2
Gang-related offenses	1.4	0
Forgery	2.6	14.8
Unlawfully remaining in Hong Kong	5.0	20.8
Prostitution	0.4	1.8
Others	7.2	7.2
Length of sentence (month)		
12 or below	11.6	55.2
13–24	17.8	28.6
25–36	15.3	4.6
37–48	11.6	2.6
49–60	7.4	1.4
61–72	5.9	1.2
73–84	4.4	0.9
85–96	4.4	0.9
97–108	2.2	0.3
109–120	3.2	0.6
121 or above	16.0	3.8

Analytical Procedures

Apart from gathering descriptive statistics, we also conducted chi-square tests to compare the significance in differences between the two genders, followed by Cramer's V, which is an effect size measurement for the chi-square test of independence. It measures how strongly two categorical fields are associated. Cramer's V refers to the magnitude of effect size (ES): ES $\leq$ 0.2 refers to fields that are only weakly associated; 0.2 $<$ ES $\leq$ 0.6 to the fields that are moderately associated; and ES $>$ 0.6 to the fields that are strongly associated. In addition, multivariate analysis was used because we have assumed that a variety of factors jointly affect prisoners' tendency to engage in violent expressive behavior. We used hierarchical multiple regression to assess how (i.e., positively or negatively) and to what extent certain predictors (e.g., hair length, aggression tendency) jointly affect the outcome (i.e., one's tendency to engage in violent behavior). We used separate multiple regressions for male prisoners and female prisoners to assess the impact of various predictors on the likelihood that a participant would engage in violent expressive behavior. To further explore the pathways through which hair length would influence prisoners' behavior, we set up three hypotheses and three mediators identified through the regression: self-esteem, procedural fairness, and negative emotional responses. To test the hypotheses, we conducted separate mediation analyses for male prisoners and female prisoners to assess the impact of various mediators on violent expressive behavior.

RESULTS

Demographics

Male Prisoners

There were 500 male participants (**Table 1**). Most of them were aged between 31 and 40 (33.4%) and 21 and 30 (27%). Regarding their highest education level, 15.3% of them had attained primary school level or below. Most (41.7%) had attained a middle school level, and 29.2% a high school level (**Table 2**). Approximately 44% of them were single, and 32.3% married with children. The majority (80.6%) indicated that they were nationals/residents of China, Hong Kong, Taiwan or Macau, thus with Chinese cultural background, indicating that about one-fifth of them (19.4%) came from other countries. Besides these findings, 35.3% of them described themselves as religious. The majority were sentenced for drug-related offenses, accounting for 53.8%, followed by theft at 14.2%. Over half of them were jailed for not more than 4 years.

Female Prisoners

There were 500 female participants. Most of them were aged between 31 and 40 (38%) and 41 and 50 (29.6%). Regarding their highest education level, most of them had attained a middle school level, accounting for 41.1%. Less than one quarter of them (21.4%) completed primary school and another quarter (25.9%) completed high school. Regarding their marriage status, 25.8% of them were single, and 38.7% of them were married with children. The majority (78.4%) were nationals/residents of China, Hong Kong, Taiwan or Macau, and about one-fifth of

TABLE 3 | Type of tools/weapons used in fights.

Type of tools/weapons used in fights	Gender				Pearson's chi-square	Cramer's V (ES)
	Male (*N* = 500)		Female (*N* = 500)			
	%	No. (adjusted residuals)	%	No. (adjusted residuals)		
• Sharpened toothbrush	17.4	87 (9.8)	0	0 (−9.8)	95.29 ($p < 0.001$)	0.309 ($p < 0.001$)
• Batteries	8.6	43 (6.3)	0.4	2 (−6.3)	39.12 ($p < 0.001$)	0.198 ($p < 0.001$)
• Cup/tumbler	33.8	169 (12.7)	2.8	14 (−12.7)	160.69 ($p < 0.001$)	0.401 ($p < 0.001$)
• Pen	30.2	151 (12.4)	1.6	8 (−12.4)	152.93 ($p < 0.001$)	0.391 ($p < 0.001$)
• Feces/urine	4.4	22 (3.1)	1.2	6 (−3.1)	9.41 ($p < 0.01$)	0.097 ($p < 0.01$)
• Saliva/spit	18.8	94 (5.6)	7.0	35 (−5.6)	30.98 ($p < 0.001$)	0.176 ($p < 0.001$)
• I did not see anything	34.2	171 (−16.3)	84.8	424 (16.3)	265.63 ($p < 0.001$)	0.515 ($p < 0.001$)

TABLE 4 | Prisoners' common observations inside the institutions.

	Male		Female		*t*-Test
	% *	Mean	% *	Mean	Sig.
Situations facilitating the use of violence					
• When fights/arguments occur, it is common for other prisoners to stand around and watch.	82.3	2.952	29.1	2.062	0.000
• Seeking revenge over previous conflicts is common.	78.5	2.926	13.4	1.864	0.000
• It is common for prisoners to incite others to create disturbance.	75.8	2.880	13.6	1.876	0.000
• The escalation of verbal confrontation to physical fights is common.	75.8	2.874	11.1	1.785	0.000
• Conflicts between prisoners are common.	74.8	2.891	22.3	1.964	0.000
• It is common for prisoners to settle outside disputes inside the institution.	59.7	2.761	5.0	2.510	0.003
• Storage of weapons is common among prisoners.	54.6	2.494	1.6	1.513	0.000
Use of violence					
• The use of violence to deal with conflicts/confrontations is commonplace.	71.2	2.813	8.1	1.772	0.000
• It is common for prisoners to use violence to take revenge on those who has bullied/hurt them before.	71.0	2.778	7.5	1.789	0.000
• It is common for prisoners to treat sex offenders violently.	62.5	2.852	5.4	2.397	0.000
• Fighting among prisoners (including the use of feces, urine or other liquids) is common.	61.9	2.615	2.6	1.557	0.000
• Gang fights (involving 5 or more prisoners) are common.	55.8	2.544	4.6	1.544	0.000
Non-violent behavior					
• It is common for prisoners to write letters to their families.	75.8	3.004	82.3	3.165	0.001
• It is common for prisoners to be concerned with social/political affairs.	60.8	2.639	57.8	2.636	0.954
• Reading is common among prisoners.	58.6	2.615	71.3	2.794	0.000
• Skincare or exercising is common among prisoners.	35.1	2.283	75.6	2.887	0.000
• Prisoners maintain a nice/cool hairstyle to enhance their confidence.	30.8	2.170	72.8	2.915	0.000
• Prisoners maintain a certain hair length to feel respected by others.	22.3	1.952	67.1	2.826	0.000

**% of participants who indicated "agree" or "strongly agree" to the statements on a four-point scale ranging from 1 = strongly disagree to 4 = strongly agree.*

them (21.6%) came from other countries. Besides these findings, 34.6% of them were religious. Quite a large number of the female prisoners were sentenced for drug-related offenses, accounting for 27.4%, while the two other main offenses were remaining in Hong Kong unlawfully, accounting for 20.8%, and theft at 16.8% (**Table 2**). Over half of them (55.2%) were jailed for 1 year or less and more than one quarter (28.6%) for 1 to 2 years.

Use of Weapons in Correctional Institutions

We asked participants to report all types of tools or weapons they saw being used in fights. **Table 3** illustrates the use of tools and weapons d curing fights inside correctional institutions. Only about one-third (34.2%) of male prisoners reported not seeing the use of weapons during fights. Cups or tumblers and pens were the most common types of weapon used, reported by 33.8% and 30.2% of male prisoners, respectively. Saliva and sharpened toothbrushes were also commonly used, reported by 18.8% and 17.4% of male prisoners, respectively. On the other hand, the use of weapons during fights does not seem to be common inside female institutions. Around 85% of female prisoners reported not seeing the use of weapons during fights. **Table 3** shows the chi-square test result. All Pearson's chi-squares are significant ($p < 0.05$), which means that there is a correlation

TABLE 5 | Concerns of allowing prisoners retain long hair.

Type of concerns of allowing prisoners retain long hair	Gender				Pearson's chi-square	Cramer's V
	Male (*N* = 500)		Female (*N* = 500)			
	%	No. (adjusted residuals)	%	No. (adjusted residuals)		
Prisoners could hide weapons inside their hair	44.6	223 (15.8)	2.2	11 (−15.8)	250.74 ($p < 0.001$)	0.501 ($p < 0.001$)
Bad hygiene inside the institution	45.4	227 (15.1)	4.2	21 (−15.1)	227.54 ($p < 0.001$)	0.477 ($p < 0.001$)
Prisoners with long hair have higher risks of being attacked	36.6	183 (12.7)	4.2	21 (−12.7)	161.62 ($p < 0.001$)	0.402 ($p < 0.001$)
Prisoners could use their long hair to hang themselves	17.4	87 (8.5)	1.6	8 (−8.5)	72.59 ($p < 0.001$)	0.269 ($p < 0.001$)
Prisoners could use their long hair as a weapon	12.6	64 (6.9)	1.4	7 (−6.9)	48.17 ($p < 0.001$)	0.219 ($p < 0.001$)
Hair could get caught in the machine while working	28.2	141 (10.1)	4.6	23 (−10.1)	101.56 ($p < 0.001$)	0.319 ($p < 0.001$)
I am not worried about the above situations	19.4	97 (−21.4)	86.8	434 (21.4)	456.03 ($p < 0.001$)	0.675 ($p < 0.001$)

TABLE 6 | Means and standard deviations of aggression by prisoner groups.

	Male		Female		*t*-Test
Aggression *	***M***	***SD***	***M***	***SD***	**Sig.**
Proactive	6.41	5.90	0.73	1.83	0.000
Reactive	9.26	5.79	2.58	2.84	0.000
Total	15.67	11.20	3.31	4.17	0.000

**The maximum scores of proactive aggression, reactive regression, and total regression are 20, 22, and 42, respectively.*

between gender and the use of weapons. Cramer's V shows that the use of cups/tumblers (ES = 0.401, $p < 0.001$), pens (ES = 0.391, $p < 0.001$) and sharpened toothbrushes (ES = 0.309, $p < 0.001$) is moderately correlated with gender. Moreover, all adjusted residuals are higher than three, which indicates that male prisoners tend to use all types of weapons in **Table 3**, while female prisoners do not.

Observations of Violence Inside Correctional Institutions

We asked participants to rate their agreement with statements regarding their observations inside the correctional institutions on a four-point scale ranging from 1 = strongly disagree to 4 = strongly agree. **Table 4** shows that about three quarters (74.8%) of male prisoners but less than one quarter (22.3%) of female prisoners indicated that conflicts between prisoners are common, as was fighting among male prisoners (61.9% versus 2.6% of female prisoners, $p < 0.001$). In addition, about 71% of male prisoners indicated that violence was commonly used to deal with conflicts and seek revenge inside institutions against only 8.1% and 7.5% of female prisoners ($p < 0.001$), respectively. More than half (55.8%) of male prisoners also indicated that gang fights involving five or more people are common inside institutions against only 4.6% of female prisoners ($p < 0.001$). More than half of the male prisoners (54.6%) reported that the storage of weapons is common among them as compared to only 1.6% of female prisoners ($p < 0.001$).

Concerning non-violent behavior, it is more common for female prisoners to write letters to families, read, exercise and use skincare than male prisoners ($p < 0.001$) (see **Table 4**). It is important to note that female prisoners commonly agreed that the maintenance of a certain hair length or hairstyle is needed to maintain or enhance one's self-esteem. About 67% of female prisoners indicated that prisoners maintain a certain hair length to feel respected by others against 22.3% of male prisoners, and 72.8% indicated that prisoners maintain a nice/cool hairstyle to enhance their confidence against 30.8% of male prisoners. The findings suggest that a presentable hairstyle and hair length are linked to female prisoners' self-esteem.

Tables 3–5 show that weapon usage and violence are common inside male institutions, and even male prisoners themselves expressed concerns that allowing male prisoners to retain long hair could exacerbate the security risks. We asked participants to indicate their concerns over allowing prisoners to retain long hair, and only 19.4% of male prisoners did not express any worry (**Table 5**). Because of the high frequency of storing weapons and using them inside male institutions, 44.6% of male prisoners reported being concerned that other prisoners could store weapons inside their hair if they were allowed to retain long hair. More than one-third (36.6%) of male prisoners were concerned that prisoners with long hair have higher risks of being attacked as others could pull their hair more easily. The overwhelming majority (86.8%) of female prisoners were not concerned that allowing prisoners to retain long hair would exacerbate the security risks. Very few female prisoners (2.2%) expressed the concern that long-haired prisoners could hide weapons in their hair. This is not surprising as we see in the tables, as weapon storage and the use of violence are not common inside female institutions.

In **Table 5**, all Pearson's chi-squares are significant ($p < 0.001$), which means that there is a correlation between gender and concerns over allowing prisoners to retain long hair. Specifically, male prisoners more than female prisoners were worried about

TABLE 7 | % and chi-square test of male prisoner's violent expressive behavior by hair length.

Type of violent expressive behavior		Male with short hair		Male with long hair		Pearson's chi-square	Cramer's V (ES)
		%	No. (adjusted residuals)	%	No. (adjusted residuals)		
Self-harm	Certainly not	87.5	217 (9.7)	46.4	116 (−9.7)	96.69 ($p < 0.001$)	0.441 ($p < 0.001$)
	Maybe	9.7	24 (−6.3)	32.8	82 (6.3)		
	Certainly will	2.8	7 (−6.2)	20.8	52 (6.2)		
Throw things	Certainly not	87.6	219 (11.2)	39.2	98 (−11.2)	120.01 ($p < 0.001$)	0.508 ($p < 0.001$)
	Maybe	11.2	28 (−8.0)	43.2	108 (8.0)		
	Certainly will	1.2	3 (−6.3)	17.6	44 (6.3)		
Hit others	Certainly not	85.6	214 (10.8)	39.0	97 (−10.8)	117.40 ($p < 0.001$)	0.485 ($p < 0.001$)
	Maybe	12.0	30 (−7.6)	42.2	105 (7.6)		
	Certainly will	2.4	6 (−6.0)	18.9	47 (6)		
Pull other's hair	Certainly not	85.2	213 (10.3)	40.6	101 (−10.3)	110.94 ($p < 0.001$)	0.471 ($p < 0.001$)
	Maybe	13.2	33 (−7.0)	41.0	102 (7.0)		
	Certainly will	1.6	4 (−6.3)	18.5	46 (6.3)		
Swear at others	Certainly not	80.8	202 (9.9)	37.2	93 (−9.9)	101.22 ($p < 0.001$)	0.450 ($p < 0.001$)
	Maybe	16.0	40 (−6.6)	42.8	107 (6.6)		
	Certainly will	3.2	8 (−5.9)	20.0	50 (5.9)		

TABLE 8 | % and chi-square test of female prisoner's violent expressive behavior by hair length.

Type of violent expressive behavior		Female with short hair		Female with long hair		Pearson's chi-square	Cramer's V (ES)
		%	No. (adjusted residuals)	%	No. (adjusted residuals)		
Self-harm	Certainly not	63.5	158 (−5.5)	85.1	211 (5.5)	40.08 ($p < 0.001$)	0.284 ($p < 0.001$)
	Maybe	16.5	41 (1.5)	11.7	29 (−1.5)		
	Certainly will	20.1	50 (5.9)	3.2	8 (−5.9)		
Throw things	Certainly not	62.2	155 (−5.1)	82.7	206 (5.1)	29.61 ($p < 0.001$)	0.244 ($p < 0.001$)
	Maybe	17.7	44 (2.0)	11.2	28 (−2.0)		
	Certainly will	20.1	50 (4.7)	6.0	15 (−4.7)		
Hit others	Certainly not	74.4	183 (−2.5)	83.7	206 (2.5)	10.86 ($p < 0.01$)	0.149 ($p < 0.01$)
	Maybe	13.8	34 (0.5)	12.2	30 (−0.5)		
	Certainly will	11.8	29 (3.2)	4.1	10 (−3.2)		
Pull other's hair	Certainly not	71.6	179 (−4.0)	86.2	212 (4.0)	18.72 ($p < 0.001$)	0.194 ($p < 0.001$)
	Maybe	15.6	39 (1.8)	10.2	25 (−1.8)		
	Certainly will	12.8	32 (3.7)	3.7	9 (−3.7)		
Swear at others	Certainly not	64.8	162 (−4.3)	81.9	203 (4.3)	19.85 ($p < 0.001$)	0.200 ($p < 0.001$)
	Maybe	20.4	51 (2.4)	12.5	31 (−2.4)		
	Certainly will	14.8	37 (3.4)	5.6	14 (−3.4)		

three main concerns: prisoners hiding weapons inside their hair (ES = 0.501, $p < 0.001$), bad hygiene inside the institution (ES = 0.477, $p < 0.001$) and being easily attacked because of long hair (ES = 0.402, $p < 0.001$). Additionally, the majority of adjusted residuals were higher than three. Indeed, male prisoners tend to consider all issues related to long hair in **Table 5**, while female prisoners tend to not.

Individual Levels of Aggression

We found that male prisoners indicated higher levels of proactive ($M = 6.41$, SD = 5.9) and reactive aggression ($M = 9.26$, SD = 5.79) when compared with female prisoners ($p < 0.001$, see **Table 6**). Male prisoners reported that they were more likely to both purposely use aggression to gain rewards or social dominance and become aggressive as a response to provocation. On the other hand, female prisoners reported low levels of proactive ($M = 0.73$, SD = 1.83) and reactive aggression ($M = 2.58$, SD = 2.84).

Impact of Different Hair Lengths on Prisoners

We distributed two versions of the questionnaire to the prisoners, one on a short hair scenario and the other one long hair. **Tables 7**, **8** show that male and female prisoners reacted differently to long and short hair length requirements. Male prisoners had a lower tendency to engage in violent expressive behaviors when they thought they needed to retain short hair length. As displayed in

TABLE 9 | Hierarchical multiple regression predicting tendency of violent expressive behavior for male prisoners.

Predictors	Model 1		Model 2	
	***B* (SE)**	β	***B* (SE)**	β
Constant	−0.697*** (0.087)		0.324 (0.245)	
Hair length (long vs. short hair)	0.588*** (0.051)	0.477	0.143* (0.058)	0.116
Frequency of instances of indiscipline	−0.015 (0.031)	−0.031	0.010 (0.026)	0.020
No. of violence-related crimes committed	0.016 (0.020)	0.033	0.006 (0.017)	0.012
Sentence length	0.000 (0.000)	0.028	0.000 (0.000)	0.001
Aggression (reactive and proactive)	0.426*** (0.074)	0.369	0.223** (0.064)	0.193
Self-esteem			−0.173** (0.056)	−0.154
Procedural fairness			−0.026 (0.042)	−0.032
Negative emotional responses			0.214*** (0.025)	0.464
R^2	0.383		0.581	
Adjust R^2	0.375		0.571	
R^2 change	0.383		0.197	
F for change in R^2	45.122***		56.434***	

*B refers to the unstandardized coefficient, β refers to the standardized coefficient, and SE refers to standard error. ***p < 0.001, **p < 0.01, *p < 0.05.*

TABLE 10 | Hierarchical multiple regression predicting tendency of violent expressive behavior for female prisoners.

Predictors	Model 1		Model 2	
	***B* (SE)**	β	***B* (SE)**	β
Constant	0.739*** (0.108)		1.319*** (0.286)	
Hair length (long vs. short hair)	−0.261*** (0.065)	−0.220	0.017 (0.072)	0.014
Frequency of instances of indiscipline	−0.101* (0.046)	−0.121	−0.142** (0.042)	−0.170
No. of violence-related crimes committed	−0.233 (0.578)	−0.022	−0.703 (0.525)	−0.066
Sentence length	0.000 (0.000)	0.031	0.000 (0.000)	0.033
Aggression (reactive and proactive)	0.280 (0.182)	0.085	0.127 (0.164)	0.039
Self-esteem			0.124 (0.075)	−0.096
Procedural fairness			−0.326*** (0.047)	−0.374
Negative emotional responses			0.075* (0.029)	0.169
R^2	0.074		0.259	
Adjust R^2	0.059		0.240	
R^2 change	0.074		0.186	
F for change in R^2	5.034***		26.249***	

*B refers to the unstandardized coefficient, β refers to the standardized coefficient, and SE refers to standard error. ***p < 0.001, **p < 0.01, *p < 0.05.*

TABLE 11 | The mediation analysis of hair length, self-esteem and violent expressive behavior.

	B (SE)	*Z*	β	BootLLCI	BootULCI	R^2	Type of mediation
Group: Male prisoners							Partial mediation (Indirect/Total = 38%) (H1a supported)
Total effect (c)	0.566 (0.050)		0.518	0.471	0.671	0.372	
Direct effect (c′)	0.350*** (0.051)	6.915	0.321	0.240	0.472		
Indirect effect (ab)	0.216 (0.044)		0.198	0.141	0.311		
Effect of IV on mediator (a)	−0.644*** (0.055)	−11.637	−0.524			0.275	
Effect of mediator on DV (b)	−0.335*** (0.045)	−7.382	−0.377				
Group: Female prisoners							No mediation (H1b not supported)
Total effect (c)	−0.233 (0.052)		−0.213	−0.345	−0.134	0.050	
Direct effect (c′)	−0.219*** (0.05)	−4.350	−0.200	−0.327	−0.122		
Indirect effect (ab)	−0.013 (0.013)		−0.012	−0.046	0.006		
Effect of IV on mediator (a)	0.206*** (0.059)	3.478	0.165			0.027	
Effect of mediator on DV (b)	−0.065 (0.043)	−0.513	−0.074				

****p* < 0.001, ***p* < 0.01, **p* < 0.05.

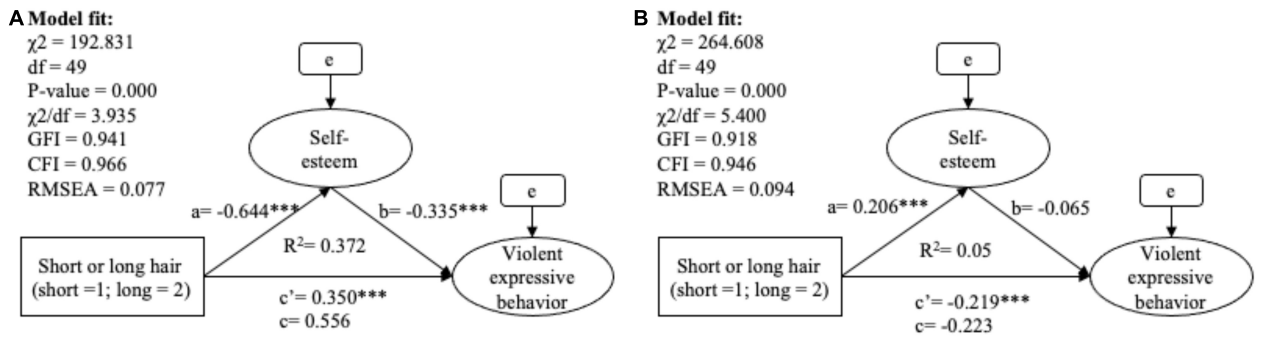

FIGURE 2 | The SEM model of mediation analysis between hair length, self-esteem and violent expressive behavior among male prisoners **(A)** and female prisoners **(B)**. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$.

Table 7, when male prisoners knew that they needed to retain a short hair length during their custodial sentences, only 1.2% to 3.2% reported they would "certainly" engage in violent expressive behavior, while 80.8% to 87.6% indicated they would "certainly not." When male prisoners were informed they needed to retain long hair, 37.2% to 46.4% reported they would "certainly" engage in violent expressive behavior such as self-harm and hitting others. All Pearson's chi-squares are significant ($p < 0.001$), which means that there is a correlation between retaining long hair and violent expression among male prisoners. Throwing things (ES = 0.508, $p < 0.001$), hitting others (ES = 0.485, $p < 0.001$) and pulling other's hair (ES = 0.471, $p < 0.001$) are the three main violent expressions when male prisoners were asked to retain long hair. The results suggest that violent expressions are moderately associated with hair length.

On the other hand, female prisoners had a lower tendency to engage in violent expressive behavior when they thought they needed to retain long hair (see **Table 8**). When female prisoners were informed they needed to retain long hair, 81.9% to 86.2% reported they would "certainly not" engage in violent expressive behavior. Despite this, when female prisoners were informed they needed to retain a short hair length, 11.8% to 20.1% reported they would "certainly" engage in violent expressive behavior. In particular, 20.1% said they would harm themselves or throw things. All Pearson's chi-squares are significant ($p < 0.01$), which means that there is a correlation between retaining short

TABLE 12 | The mediation analysis of hair length, negative emotional response and violent expressive behavior.

Group: Male	*B* (SE)	*Z*	β	BootLLCI	BootULCI	R^2	Type of mediation
Group: Male prisoners							Partial mediation (Indirect/Total = 82%) (H2a supported)
Total effect (c)	0.569 (0.05)		0.518	0.475	0.674	0.626	
Direct effect (c′)	0.128** (0.04)	3.202	0.116	0.04	0.221		
Indirect effect (ab)	0.441 (0.048)		0.402	0.356	0.574		
Effect of IV on mediator (a)	1.371*** (0.097)	14.129	0.558			0.311	
Effect of mediator on DV (b)	0.322*** (0.021)	15.436	0.72				
Group: Female prisoners							Full mediation (H2b supported)
Total effect (c)	−0.234 (0.052)		−0.213	−0.346	−0.136	0.121	
Direct effect (c′)	−0.048 (0.056)	−0.861	−0.044	−0.179	0.076		
Indirect effect (ab)	−0.185 (0.039)		−0.169	−0.266	−0.113		
Effect of IV on mediator (a)	−1.432*** (0.107)	−13.385	−0.525			0.275	
Effect of mediator on DV (b)	0.129*** (0.021)	6.120	0.322				

****p < 0.001, **p < 0.01, *p < 0.05.*

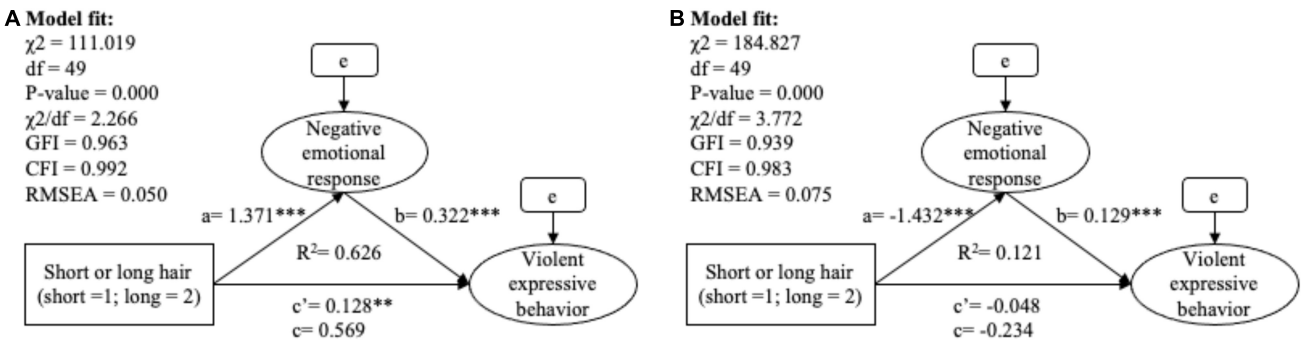

FIGURE 3 | The SEM model of mediation analysis between hair length, negative emotional response and violent expressive behavior among male prisoners **(A)** and female prisoners **(B)**. ****p* < 0.001, ***p* < 0.01, **p* < 0.05.

hair and violent expression among female prisoners. Self-harm (ES = 0.284, $p < 0.001$), throwing things (ES = 0.244, $p < 0.001$) and swearing at others (ES = 0.200, $p < 0.001$) were the three main violent expressions when female prisoners were asked to retain long hair; however, violent expressions were only weakly associated with hair length.

Multivariate Analyses

Male Prisoners

Model 1 was statistically significant, $F(5,363) = 45.122$, $p < 0.001$, $R^2 = 0.375$. Hair length (i.e., long hair vs. short hair) and aggression had significant partial effects on one's tendency to engage in violent expressive behavior. In particular, requiring male prisoners to retain long hair ($B = 0.588$, SE = 0.051, β = 0.477, $p < 0.001$) had the largest effect on the outcome variable. Prisoners with higher levels of aggression ($B = 0.426$, SE = 0.074, β = 0.369, $p < 0.001$) were also more likely to engage in violent expressive behavior (**Table 9**). The self-esteem scale, procedural fairness scale, and negative emotional responses were entered in Model 2. Model 2 was statistically significant, $F(3,360) = 56.434$, $p < 0.001$, $R^2 = 0.571$, meaning the relationship between the predictors and the outcome is unlikely to be caused by random chance. Hair length and aggression scores continued to exert significant partial, albeit reduced, effects on the outcome variable. Among the newly entered variables, self-esteem and negative emotional responses exerted

TABLE 13 | The mediation analysis of hair length, procedural fairness and violent expressive behavior.

Group: Male	*B* (SE)	*Z*	β	BootLLCI	BootULCI	R^2	Type of mediation
Group: Male prisoners							Partial mediation (Indirect/Total = 40%) (H3a supported)
Total effect (c)	0.566 (0.050)		0.518	0.472	0.672	0.437	
Direct effect (c′)	0.229*** (0.050)	4.542	0.209	0.133	0.345		
Indirect effect (ab)	0.337 (0.042)		0.309	0.261	0.431		
Effect of IV on mediator (a)	−0.831*** (0.056)	−14.827	−0.601			0.361	
Effect of mediator on DV (b)	−0.406*** (0.041)	−9.877	−0.514				
Group: Female prisoners							Full mediation (H3b supported)
Total effect (c)	−0.234 (0.052)		−0.213	−0.345	−0.136	0.146	
Direct effect (c′)	−0.076 (0.052)	−1.455	−0.069	−0.182	0.019		
Indirect effect (ab)	−0.158 (0.030)		−0.144	−0.225	−0.105		
Effect of IV on mediator (a)	0.640*** (0.067)	9.618	0.414			0.171	
Effect of mediator on DV (b)	−0.247*** (0.036)	−6.881	−0.348				

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

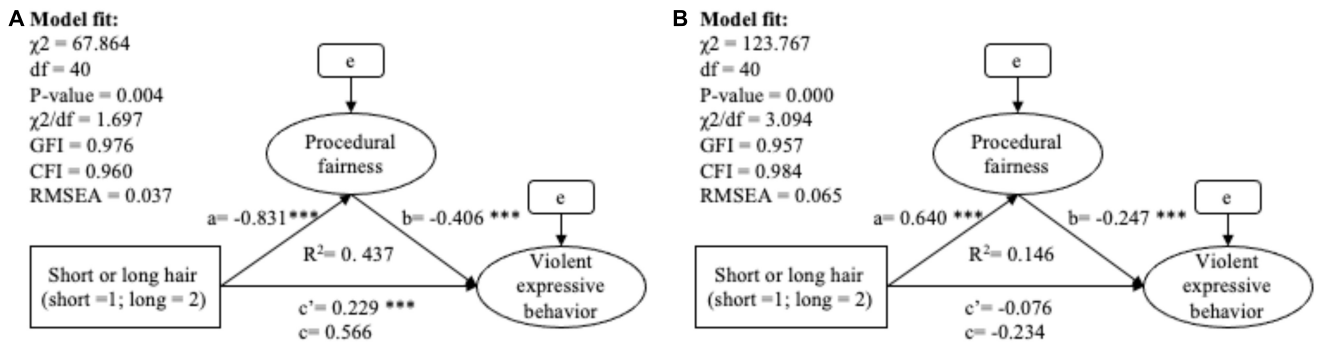

FIGURE 4 | The SEM model of mediation analysis between hair length, procedural fairness and violent expressive behavior among male prisoners **(A)** and female prisoners **(B)**. $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

significant effects. Those who reported a lower level of self-esteem ($B = -0.173$, SE = 0.056, β = −0.154, $p = 0.002$) and those who reported more negative emotional responses ($B = 0.214$, SE = 0.025, β = 0.464, $p < 0.001$) were more likely to engage in violent expressive behavior.

Female Prisoners

Model 1 was statistically significant, $F(5,317) = 5.034$, $p < 0.001$, $R^2 = 0.059$. Hair length (i.e., long hair vs. short hair) and the frequency of committing acts of rebellion against prison discipline had significant partial effects on one's tendency to engage in violent expressive behavior. In particular, requiring female prisoners to retain short hair ($B = -0.261$, SE = 0.065, β = −0.220, $p < 0.001$) had the largest effect on the outcome variable (**Table 10**). The self-esteem scale, procedural fairness scale, and negative emotional responses were entered in Model 2. Model 2 was statistically significant, $F(3,314) = 26.249$, $p < 0.001$, $R^2 = 0.240$. The frequency of committing acts of rebellion against prison discipline continued to exert significant partial effects on the outcome variable. Among the newly entered variables, the perception of procedural fairness and negative emotional responses exerted significant effects, with the former emerging as the largest predictor. Those who reported a lower level of perceived procedural fairness by correctional institution staff ($B = -0.326$, SE = 0.047, β = −0.374, $p < 0.001$) and those who reported

more negative emotional responses (B = 0.075, SE = 0.029, β = 0.169, p = 0.010) were more likely to engage in violent expressive behavior.

Mediation Analysis Using Structural Equation Modeling

To further explore the pathways through which hair length would influence prisoners' behavior, we conducted mediation analysis in which three variables—"self-esteem," "negative emotional responses," and "procedural fairness"—were treated as the main paths transmitting the effect of hair length to violent expressive behavior. Two other variables—"frequency of instances of indiscipline" and "aggression"—were not used as mediators because it is obvious that more instances of indiscipline and more aggression in prisons would lead to violence.

The mediation analysis was conducted using structural equation modeling (SEM) with the tool AMOS, rather than the PROCESS in SPSS. With the help of SEM, even subtle evidence of hair length exerting an effect on prisoners' violent expression and the differences between male and female prisoners would be captured. The hypotheses for the mediation analyses are that long hair for male prisoners poses security risks by undermining self-esteem (H1a), triggering negative emotional response (H2a), and producing a sense of procedural unfairness (H3a). Similarly, short hair for female prisoners poses security risks by undermining self-esteem (H1b), triggering negative emotional responses (H2b), and producing a sense of procedural unfairness (H3b).

First, we conducted confirmatory factor analysis for scales of self-esteem, negative emotional response, and violent expressive behavior. Some items were deleted, as the factor loading did not reach the threshold of 0.5 (i.e., S2, S4, and S6 in self-esteem). In addition, some residuals were correlated for a better or acceptable model fit (i.e., e5 and e7, e8 and e9 in self-esteem; n1 and n2, n1 and n6 in negative emotional response; p1 and p2 in procedural fairness; v1 and v2 in violent expressive behavior). Three scales were adjusted to be more suitable for the mediation analysis with SEM regarding good factor loading and acceptable model fit (see **Supplementary Appendix**).

Hypothesis 1, which assumes self-esteem be a mediator to transmit the impact of hair length on violent expressive behavior, was partially supported (see **Table 11** and **Figure 2**). Long hair lowered the self-esteem of male prisoners and further led to increased self-perceived tendencies to engage in violent expressive behavior, with the mediation effect accounting for 38% of the total effect ($B_{(indirect)}$ = 0.216, SE = 0.044, $\beta_{(indirect)}$ = 0.198, bootstrapping 95% CI = [0.141, 0.311]). In contrast, for female prisoners, self-esteem was not a valid mediator to transmit the effect of unwanted hair length (i.e., short hair) to violent expression ($B_{(indirect)}$ = −0.013, SE = 0.013, $\beta_{(indirect)}$ = −0.012, bootstrapping 95% CI = [−0.046, 0.006]). Without the mediation of self-esteem, hair length still exerted a negative impact on violent expression in the female group. Hence, Hypothesis 1a was supported while Hypothesis 1b was not.

Hypothesis 2 (a and b), which predicts that negative emotional response is a mediator between hair length and violent behavior, was fully supported (see **Table 12** and **Figure 3**). Retaining longer hair triggered a negative emotional response of male prisoners, consequently resulting in an increase in perceived violent expressive behavior ($B_{(indirect)}$ = 0.441, SE = 0.048, $\beta_{(indirect)}$ = 0.402, bootstrapping 95% CI = [0.356, 0.574]), with 82% of the effect of the hair length on violent expressive behavior explained by this mediation path within the male group. The situation was quite similar in female prisoners, while a slight difference was that negative emotional response fully mediated the effect of undesired hair length on violent expression ($B_{(indirect)}$ = −0.185, SE = 0.039, $\beta_{(indirect)}$ = −0.169, bootstrapping 95% CI = [−0.266, −0.113]).

Hypothesis 3 (a and b), which predicts procedural fairness as a mediator bridging the effect of undesired hair length on violent expression (see **Table 13** and **Figure 4**), was fully supported by the outcome of a partial mediation in the male group ($B_{(indirect)}$ = 0.377, SE = 0.042, $\beta_{(indirect)}$ = 0.309, bootstrapping 95% CI = [0.261, 0.431]) and a full mediation in the female group ($B_{(indirect)}$ = −0.158, SE = 0.030, $\beta_{(indirect)}$ = −0.144, bootstrapping 95% CI = [−0.225, −0.105]).

CONCLUSION

The present study found that the potential risks of individual violence are high in male prisons. Aggression scores show that male prisoners had a potential risk of engaging in aggression, scoring 15.67 out of a total of 42 (see **Table 6**). Consequently, it is likely that they would sometimes engage in aggression. It is observed that conflicts, fighting, revenge seeking, and gang fights by male prisoners were common (55.8% to 71.2%). The findings are in line with previous research showing that male prisoners commit more violence, and more serious violence, than their female counterparts (Craddock, 1996; Wolff et al., 2007; Sorensen and Cunningham, 2010; Wulf-Ludden, 2013). Cups, tumblers, and pens were seen to be the most common types of weapon used in the conflicts. Since the perceived risks of weapon use by prisoners are high, the chances of the occurrence of violence inside correctional institutions should not be underestimated. Correctional institutions should implement relevant security measures, including hair regulation measures, that are effective in keeping all the potential risk factors under control. The present study confirmed that one risk factor that can incite violence is the hair length requirement, in spite of gender differences. The study showed that male prisoners prefer short hair and female prisoners prefer long hair, with the possibility of violence under the contrary conditions.

For men's prisons, the perceived risks of security threats and undisciplined behaviors increase if male prisoners retain long hair. There is a high possibility that allowing male prisoners to retain long hair would result in the hiding of weapons (44.6%) and becoming an attack target (36.6%). Long hair in male prisoners could be used to hide small and sharpened objects or self-made needle-like weapons for the purposes of self-defense, attacking other inmates, or committing suicide. This is in line with previous research showing that long hair is used in fighting or attacking tactics among male prisoners (Singh, 1997; Tjaden and Thoennes, 1998; Rippon, 2000). In addition, the present study revealed that long hair length for male prisoners would

likely increase their negative emotional responses and sense of procedural unfairness, thereby leading to violent expressive behavior. It also revealed that long hair length for male prisoners would likely lower their self-esteem. This is understandable given that male prisoners' short hair is usually regarded as a symbol of masculinity and long hair femininity, and previous studies have also identified a masculinity culture in men's prisons in which masculine men often are positioned at the higher level of the power hierarchy when compared with feminine men (Donaldson, 2001; Hensley et al., 2003; Michalski, 2017). Requiring all male prisoners to retain short hair would be conducive to the emotional stability of male prisoners and minimize the potential danger they pose to both themselves and others.

For women's prisons, the risk of security threats and undisciplined behaviors increases if female prisoners are required to cut their hair short. The study found that women generally have a lower risk of aggression when compared with male prisoners, as their aggression scores are very low (3.31 out of a total of 42). Conflicts and the use of weapons among female prisoners were also not common. However, if these prisoners were forced to cut their hair short, a substantial number of them would certainly engage in violent expressive behavior, such as self-harm, throwing things, hitting others, pulling others' hair, and swearing at others (ranging from 11.8% to 20.1%), as many of them believed that nice hairstyles and length would make them feel respected and self-confident (67.1% and 72.8%, respectively). Furthermore, short hair length requirements for female prisoners would be likely to lower their perceived sense of procedural fairness of the correctional institutions and increase their negative emotional responses. Allowing female prisoners to retain long hair would thus be conducive to their emotional stability and minimize their risk of violent expressive behavior. Involuntary haircutting of female prisoners would arouse unnecessary emotional disturbance that may lead to aggression, thus causing a security risk.

To echo previous research on gender identity and hairstyles (Mesko and Bereczkei, 2004; Stenn, 2016), the present study revealed that while hairstyles may relate to the identity of a person, there are gender differences in their preferred hairstyles and identity. As a cultural and universal norm, women have longer hair than men, and they use extra resources to keep long hair looking pretty, which also becomes a status symbol (Stenn, 2016). Long hair represents beauty, femininity, physical health, and attractiveness, even in Chinese societies (Mesko and Bereczkei, 2004; Zheng, 2016) and among Chinese female prisoners. Undoubtedly, depriving them of the right to have long hair would result in emotional instability and violent expressive behavior. On the other hand, while long hair in men may symbolize anti-authority and sexuality in a society (Leach, 1958; Hallpike, 1969; Larsen and White, 1974), short hair is culturally associated with the prowess and toughness of men (Manning, 2010), or it is essential in maintaining the identities of gang members (Melde and Esbensen, 2013), especially in prisons where a culture of masculinity is dominant (Michalski, 2017). This finding is in line with the argument of Synnott (1987, p. 382) that "opposite sexes have opposite hair."

To conclude, the present study applies a perspective of gender differences to explore concerns around restrictive hair regulations in Chinese prisons. While it found that male prisoners are inherently more tensive than the female group in terms of violent proclivities, the influence of hairstyles on behavioral responses in male and female prisoners should not be underestimated. The findings suggest that there are significant differences in the cultural meanings of hairstyles between men and women, which would affect the management of prisons. Violent behavior is associated with hairstyles, and the influence path is gender related. Long hair in male prisons would lead to security and violence risks, but this is not the case in female prisons. Hairstyles that do not meet social norms would decrease male prisoners' self-esteem, while increasing all prisoners' negative emotional responses and reducing their perceived procedural fairness.

The present study examined a rare research topic: hairstyles and gender differences in violence in Chinese prisons. Given that many prisons in Asian and African nations have an authoritarian style of governance similar to that of China, this study is of considerable international relevance. It concludes that hair regulation is needed to ensure the day-to-day operations of correctional institutions for two reasons: the maintenance of security, and the maintenance of prisoners' mental well-being. From a prison management perspective, hair regulation is an essential policy in correctional institutions for maintaining workplace safety, hygiene, security, and discipline. However, the implementation of any hair-regulating policy should consider gender needs and differences, or else it would induce prisoners' negative emotions and violent expressive behavior. Our findings and conclusions do not concur with the aforementioned court judgment on safeguarding prisoners' equality and preventing sex discrimination. Any hair-regulation policy should respect unique social and cultural meanings and gender differences and address the negative impact on prisoners' emotion and self-identity. In particular, forcing female prisoners to cut their hair short harms not only their body (Holton, 2020) and femininity (Manning, 2010) but also their self (Fabry, 2016), thus shaming them by taking away their sexual identity (Warring, 2006). This act in itself serves as a secondary punishment and constitutes gender-based violence (Labotka, 2014; Ruberg, 2019). Based on the hair length impacts on prisoners, we recommend short hair length for male prisoners and long hair length for female prisoners in Chinese prisons if a hair-regulation policy has to be implemented.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Correctional Services Department of Hong Kong. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

TWL organized, reviewed, and edited the manuscript. CH organized the database and wrote the first draft of the manuscript. XG contributed to data analysis. SK contributed to literature review. All authors contributed to manuscript revision, read, and approved the submitted version.

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SUPPLEMENTARY MATERIAL

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SYSTEMATIC REVIEW
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Risk Assessment Instruments for Intimate Partner Femicide: A Systematic Review

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Intimate partner violence is a severe problem that has taken the lives of thousands of women worldwide, and it is bound to continue in the future. Numerous risk assessment instruments have been developed to identify and intervene in high-risk cases. However, a synthesis of specific instruments for severe violence against women by male partners has not been identified. This type of violence has specific characteristics compared to other forms of intimate partner violence, requiring individualized attention. A systematic review of the literature has been conducted to summarize the intimate partner homicide risk assessment instruments applied to this population. It has been carried out with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement guidelines. The search strategy yielded a total of 1,156 studies, and only 33 studies met eligibility criteria and were included in the review. The data of these studies were extracted, analyzed, and presented on study characteristics (country and year, sample, data sources, purpose of the studies) and main findings (a brief description of the instruments, risk factor items, psychometric properties). The results indicate that the Danger Assessment, the Danger Assessment for Immigrants, the Danger Assessment for Law Enforcement, the Danger Assessment-5, the Taiwan Intimate Partner Violence Danger Assessment, the Severe Intimate Partner Risk Prediction Scale, The Lethality Screen, and the H-Scale are specific risk assessment instruments for predicting homicide and attempted homicide. There are differences in the number and content of risk assessment items, but most of them include the evidence's critical factors associated with homicide. Validity and reliability scores of these instruments vary, being consistency and accuracy medium-high for estimating homicide. Finally, implications for prediction and prevention are noted, and future research directions are discussed.

Keywords: intimate partner violence, homicide, prediction, risk assessment, systematic review, women

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1. INTRODUCTION

Violence against women is a global health problem of epidemic proportions (World Health Organization, 2013, 2021). It is estimated that around 35% of women suffer violence in their lifetime, being the most common violence type perpetrated by intimate partners, which affects approximately 30% of females worldwide (Devries et al., 2013). Thus, a woman is more likely to

be injured, raped, or killed by her intimate partner than other people (World Health Organization, 2005; United Nations, 2006). There are different terms to refer to this violence, such as domestic violence, violence against women, intimate partner violence, marital violence, or wife assault. The denomination "partner violence against women" (PVW) is used in the current study. It refers to a physical, sexual, and psychological assault against women from their current or former men partners (Cunha and Goalves, 2016; Spencer and Stith, 2020).

Victimization has negative consequences for women's health, causing injuries and anxiety-stress responses that affect the gastrointestinal, cardiac, reproductive, and neurological systems (Wisner et al., 1999; Ruiz-Pérez et al., 2007; Ellsberg et al., 2008). Irreversible and permanent cessation of vital functions of the organism causing death is the most severe outcome of PVW (Snider et al., 2009). It affects 30 thousand women's lives annually, constituting approximately 40% of all homicides (Stöckl et al., 2013; United Nations Office on Drugs and Crime, 2018). The term "intimate partner femicide" (IPF) is used in this study when referring to severe violence resulting in women's deaths that are committed by their present or former intimate partners in heterosexual relationships (Campbell et al., 2009; Storey and Hart, 2014; Messing et al., 2015a; Messing and Campbell, 2016).

The high rates and severity of PVW highlight the importance of predicting future violence, based on scientific evidence, to manage this risk (Messing et al., 2020b). This prediction is possible through the development of risk assessment instruments that evaluate the danger in the violent relationship and take the information for aggressors' intervention and victim's safety planning (Campbell et al., 2009; Echeburúa et al., 2009). Numerous risk assessment instruments exist to assess different outcomes related to intimate partner violence as physical and sexual violence, recidivism or reassault, and homicide (Dutton and Kropp, 2000; Hanson et al., 2007; Kropp, 2008; Nicholls et al., 2013; Graham et al., 2019).Tools with the power to predict homicide are required to discern between potential lethal and non-lethal violence cases. Scientific evidence reveals that there are notable differences in victim, offender and situational characteristics that contribute to the probability of PPW escalating to IPF (Jung and Stewart, 2019; Overstreet et al., 2021). The increase in frequency and severity of violence, separation/divorce and kill threats are some of the main factors on which research in the field agree (Nicolaidis et al., 2003; Belfrage and Rying, 2004; Campbell et al., 2009; Dobash and Dobash, 2011; Kivivuori and Lehti, 2012; Vatnar and Bjørkly, 2013; Cunha and Goncalves, 2016; Johnson et al., 2020; Monckton Smith, 2020; Abrunhosa et al., 2021). It is the occurrence of certain elements that lead to IPF, not a simple progression of violence (Dobash et al., 2007). This information assists professionals to effectively manage the limited resources available by focusing their efforts on quickly, comprehensively, and effectively protecting those victims who are at high risk of being killed by their intimate partners (Storey and Hart, 2014).

Risk assessment instruments refer to tools that assist the "decision-making process through which we have to determine the best course of action by estimating, identifying, qualifying, or quantifying risk" (Nicholls, 2006). In this context, the risk is understood as the probability that an individual will engage in a certain kind of behavior in the future (Otto and Douglas, 2011; Fedock and Covington, 2019). Hence, specialized risk assessment tools designed for intimate partner homicide assess the risk of a lethal assault perpetrated by one partner against the other.

Most of the intimate partner homicide risk assessment instruments are applied regardless of the sex of both victim and aggressor (men to women, women to men, men to men, and women to women relationships) (Nicholls et al., 2013; Graham et al., 2019). PVW is an entirely different category of violence from other forms of intimate partner violence because it is the manifestation of a historical gender asymmetry and unequal power in relationships between men and women that led to domination and subordination (Russell and Harmes, 2001; De Jesus and da Silva, 2018). Men use violence as a demonstration to women that they have the authority in the relationship, having women controlled and subjected to their criteria (Anderson, 2005; González and Rodríguez-Planas, 2020). As violence, in this case, is different from those happening in other types of relationships, this phenomenon needs to be considered when using sensitive risk assessment instruments.

The inexistence of a gold standard in homicide risk assessment instruments for the diverse groups of intimate partner relationships could lead to errors in predictions (Nicholls et al., 2013). Deaths are predictable and preventable if adequate tools are used to target the population-based on factors known associated with it in each case (Johnson et al., 2019). Thus, for the prediction of IPF, it is essential to use tools that include risk factors items specific to female victimization by male aggressors in relationships. These might not coincide with the most convenient tools for intimate partner homicide in general. Summarizing sensible risk assessment instruments for IPF is a priority because of its high prevalence compared with homicide in other intimate partner relationships groups (Garcia et al., 2007; Messing et al., 2013). However, no studies focusing on this aspect have been identified to date. Graham et al. (2019) identified the need for future research to assess the reliability, validity, and feasibility of intimate partner violence and homicide risk assessment instruments in the diverse intimate relationship population.

Reliability and validity are common psychometric properties used to evaluate intimate partner homicide and reassault risk assessment instruments (Graham et al., 2019). Reliability refers to the reproducibility or consistency of measurement tools in obtaining the same results on repeated application to a person or group under similar circumstances (Cook and Beckman, 2006). The procedures most used to determine reliability are internal consistency reliability and interrater reliability (Heale and Twycross, 2015; Graham et al., 2019). The first refers to the degree to which the different items of an instrument perform together to measure a construct consistently, using the Cronbach's α commonly. In the area of violence risk assessment, Semahegn et al. (2019) indicated that the minimum acceptable value of the Cronbach's α is 0.7 (Nunnally, 1994; DeVellis, 2003; Kimberlin and Winterstein, 2008; Taber, 2018). Interrater reliability analyses consistency under agreement responses among multiple raters on different items of an instrument, using standard statistics

of percentage agreement, interclass and intraclass correlation, Pearson's *r*, Spearman's *p*, and Cohen's *k* (Nunnally, 1994; DeVellis, 2003).Intraclass correlation coefficient is widely used and, in the field of violence risk assessment, Telles et al. (2009) mentioned that values from 0.4 to 0.6 are acceptable.

Validity refers to the degree of accuracy of an instrument in measuring the theoretical construct that it is intended to measure, revealing whether it can be used for its intended purpose (Kimberlin and Winterstein, 2008; Sampieri, 2018). There are different types of validity, including content, construct, and criterion validity. The content validity is concerned with the extent to which the substance of the instrument's elements is adequate to assess the specific domains that encompass the construct measured (Carmines and Zeller, 1979). The construct validity refers to how well an instrument reflects and measures a theoretical concept by determining the strength of correlation between the components of the instrument to know they are parts of the exact theoretical concept measurement and differ from other measures (Cronbach and Meehl, 1955). The criterion validity is based on a comparison of the instrument with another external criterion that measures the same construct through correlations' analysis of the results obtained in them (DeVellis, 2003). If all criteria types apply at the same time, the validity is said to be concurrent (Kaplan and Saccuzzo, 2013).

Predictive validity is a specific form of criterion validity, and it refers to the accuracy of an instrument for predicting a future criterion measure such as homicide (Messing et al., 2013, 2015a). This point is typically assessed in terms of sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), Receiver Operating Characteristic (ROC), and Area under the Curve (AUC). Sensitivity refers to the correct identification of cases expected to meet the predictive criterion, whereas specificity targets cases that are not expected to meet it. For instance, the sensitivity in risk assessment instruments for intimate partner homicide refers to the correct classification of lethal cases and the specificity to the correct classification of non-lethal cases (Parikh et al., 2008; Loinaz, 2017; Graham et al., 2019). PPV is the probability of cases that are expected to meet the criterion, and it occurs. NPV is the probability of cases not expected to meet the criterion, and it does not occur. Following the previous example, PPV corresponds to the probability of victims that are expected to be killed and indeed die, and NPV to the probability of victims that are not expected to be killed and do not die (Faller, 2005; Akobeng, 2007). The ROC is a graph that plots sensitivity as a function of 1-specificity obtaining the AUC. These provide information of predictive accuracy on a scale of 0 to 1. An AUC of 0.50 indicates an inability to predict. The closer to 1.0, the better the prediction accuracy (Messing and Thaller, 2013; Messing et al., 2013; Loinaz, 2017). For the field of violence risk assessment, Rice and Harris (2005) indicate that values between 0.6 and 0.7 are considered acceptable.

For the mentioned, the purpose of the current systematic review is to synthesize the scientific knowledge of risk assessment instruments used specifically for IPF, which aid in predicting cases in danger and, subsequently, the prevention of lethal results. Hence, the research questions are the following:

1. What are the specific risk assessment instruments for IPF?
2. What are the risk factors for IPF included in the instruments?
3. What are the reliability and validity of the instruments?

2. METHOD

The reporting of the current systematic review was guided by the standards of the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) Statement (Page et al., 2021). It details a process of identification, selection, appraisal, and synthetization of the studies to ensure a quality scientific review. Even though this guide was primarily used in the health framework, it has been applied to other areas of research related to intimate partner violence (Gerino et al., 2018; Velotti et al., 2018). A meta-analysis has not been developed because of the heterogeneity of statistical information available on the publications included in the current study, as the findings were not comparable.

2.1. Search Strategy

The search strategy was conducted on November 13, 2021, in the following databases: Web of Science (WOS), SCOPUS, PROQUEST, APA PsycInfo, APA PsycArticles, and CINAHL COMPLETE. The search terms included on them were composed of three sets of keywords combined with different Boolean operators, that is ("domestic violence" OR "intimate partner violence" OR "violence against women" OR "gender-based violence" OR "spous* abuse" OR "spous* violence") AND ("danger assessment" OR "risk tool" OR "risk assessment" OR "lethality assessment" OR "instrument" OR "evaluation" OR "appraisal") AND ("homicide" OR "murder" OR "mortality" OR "kill" OR "lethal*" OR "severe violence" OR "femicide"). The search was limited by the mentioned terms in the title and abstract, both separately and together.

2.2. Eligibility Criteria

Studies were included in the systematic review if they (1) examine the available risk assessment instruments for IPF developed and tested with women victims and male offenders' samples, (2) apply these instruments in the IPF field, (3) are empirical articles, (4) are in English and (5) are accessible in full text.

Studies were excluded if they (1) explore risk assessment instruments for intimate partner homicide for mixed and same-sex partnerships, (2) analyze risk appraisal tools that predict intimate partner violence in general not including homicide, (3) examine risk instruments that evaluate interpersonal violence in unspecifying populations, (4) appraise medical assessment tools used with victims and aggressors, (5) evaluate programs, guides and protocols aim at prevention of intimate partner homicide, (6) incorporate case studies, (7) constitute a systematic review and meta-analysis, (8) are books, book chapters, and theses, (9) are not empirical studies, (10) are not English and (11) are not accessible in full text.

2.3. Study Selection, Data Collection, and Summary Measures

After piloting the search strategy, duplicate studies were immediately removed. Subsequently, a study selection process of the remaining ones was carried out by peers in two phases. First, researchers screened the studies by titles and abstracts following the inclusion and exclusion criteria. Second, those that passed the screening were checking a full-text read using the same criteria for eligibility. The studies that met the inclusion criteria were included, and their quality was assessed.

Data extracted were organized into five sections. First, the study selection section describes the identification, screening, eligibility, and inclusion of the studies. Second, the study characteristics section includes the country and year, sample, data sources, and purpose of the studies included in the systematic review. Third, the main findings section provides knowledge about the risk assessment instruments for IPF, including a description of each detected and their number and content of the risk factor items, reliability, and validity. Fourth, the quality of included studies section includes the quality assessment results.

2.4. Quality Assessment

2.4.1. Quality Assessment of the Search Strategy

The design and execution of the search strategy in scientific databases is a relevant element in elaborating systematic reviews since it provides the studies that will be part of it. A quality assessment of the search strategy is essential to identify its adequacy in obtaining studies on a determined theme and, therefore, to support final results that respond to the research objectives. Hence, one of the quality indicators analyzed is the content of the studies included in the systematic review. It is assumed that if these studies' keywords and research topics respond to the research questions, the search strategy employed has been adequate.

A Latent Semantic Analysis (LSA) was also implemented in this section. LSA is a text mining methodology for extracting and deciphering key latent factors existing in initially unclustered texts (Landauer et al., 1998). LSA uses information extraction and natural language processing techniques and applies them with algorithms and methods from data mining, machine learning, and statistics (Evangelopoulos et al., 2012). The keywords of the studies included in the systematic review are extracted and transformed into a frequency matrix with the term frequency-inverse document frequency (TF-IDF) weighting method (Havrlant and Kreinovich, 2017). This weighting schema increases the relevance of uncommon keywords and reduces the usual ones by emphasizing uniqueness. After that, the singular value decomposition (SVD) technique was applied to the weighted matrix to decompose it into three matrices: (1) the term-by-factor matrix showing the loadings of keywords on a particular latent factor, (2) the singular value matrix representing the importance of certain factors, and (3) the document-by-factor matrix presenting the loadings of texts on a particular latent factor. Each latent factor is linked to specific high-loading keywords and to the text of the studies representing the same underlying research theme that makes this association possible by variance explained.

2.4.2. Quality Assessment of the Studies

Examining the rigorousness of the included studies is an essential part of the review process since the evidence reported in them impacts the findings of the current study. No specific instruments have been identified to evaluate the quality of studies included in reviews related to intimate partner violence/homicide risk assessment instruments. Several systematic reviews and meta-analyses on intimate partner violence and violence risk assessment tools use criteria adapted from the Critical Appraisal Skills Programme (2020) (CASP) to assess the risk of bias within studies, and some of them combine it with another guidance from the Effective Public Practice Project (2008) (EPHPP) and Centre for Review and Disseminations (2009) (CRD) (Lagdon et al., 2014; Geraghty and Woodhams, 2015; Rossdale et al., 2020). In the current study, both themes are analyzed, which is why the mentioned checklists are appropriate to use. Specifically, the tool created by Geraghty and Woodhams (2015) which combines these three checklists is used. It includes 16 items categorized into four sections: selection bias, measurement bias, attrition bias, and reporting bias. The scoring system consists on assigning a score of 0 to each item if the conditions are not met, 1 if they are partially met, and 2 if they are entirely met (Geraghty and Woodhams, 2015). There is no cut-off score indicating high or low quality, being designated by the experts' criteria. The quality of each study was assessed by two researchers.

3. RESULTS

3.1. Study Selection

The search strategy yielded a total of 1,156 publications across all databases. 517 was removed as duplicates, and 639 publications remained for screening. Of those, 84 met the inclusion criteria under the title and abstract read, and 555 of them were removed from the exclusion criteria. After a full-text reading, 51 publications were removed, and 33 were included in the systematic review according to the eligibility criteria (see **Figure 1**).

3.2. Study Characteristics

The characteristics of the included studies are summarized in the **Table 1**. The relevant findings are presented in the following paragraphs.

3.2.1. Country and Year

There are differences in dates and countries of the studies. The first study was published in 1986 in the United States (Campbell, 1986), and it has continued similarly in subsequent years. Twenty-seven studies were located in the United States to date, in each of the following years: Campbell (1986), McFarlane et al. (1998), Glass et al. (2008), Campbell et al. (2009), Glass et al. (2009), Snider et al. (2009), Glass et al. (2010), Messing et al. (2013), Bianchi et al. (2014), Messing et al. (2014), Messing et al. (2015a,b), Messing and Campbell (2016), Messing et al. (2016), Brignone and Gomez (2017), Grant and Cross-Denny

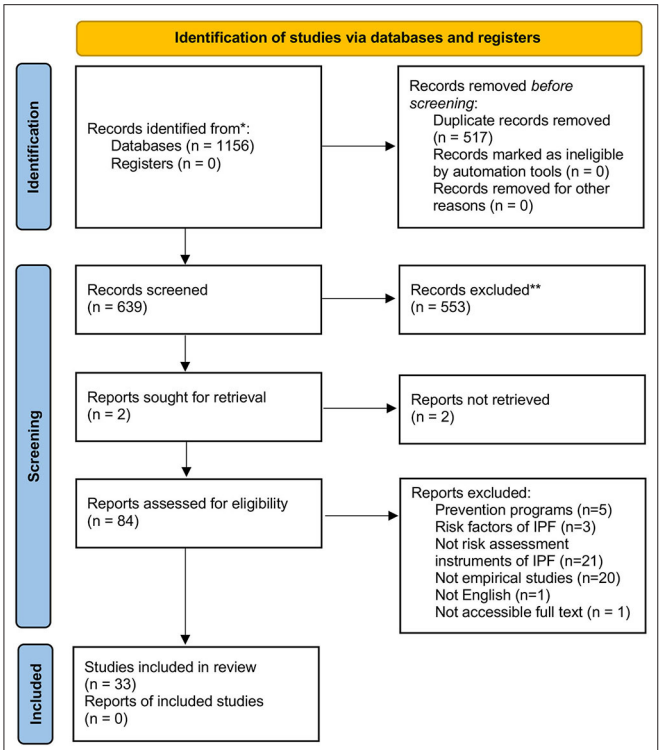

FIGURE 1 | PRISMA flow diagram of the study selection process (Page et al., 2021).

(2017), Messing et al. (2017), Dutton et al. (2018), Ward-Lasher et al. (2018), Dutton et al. (2019), Richards et al. (2019), Sabri et al. (2019), Johnson et al. (2020), Messing et al. (2020a,b) and Anderson et al. (2021), Williams et al. (2021). Other studies have been done, for the last years, in other countries such as Spain in and Echeburúa et al. (2009), Canada in Storey and Hart (2014), China in Wang (2015), Portugal in Cunha and Goalves (2016), and Norway in Nesset et al. (2017), Spain in López-Ossorio et al. (2021) and Echeburúa et al. (2009).

3.2.2. Sample

The sample size varied among the studies between 16 and 4,665 participants. This is constituted by a common sample of women victims of IPF, attempted IPF, and PVW by current or former male partners in heterosexual relationships (Campbell, 1986; McFarlane et al., 1998; Glass et al., 2008, 2009, 2010; Campbell et al., 2009; Snider et al., 2009; Messing et al., 2013, 2014, 2015a,b, 2016, 2017, 2020a,b; Bianchi et al., 2014; Storey and Hart, 2014; Wang, 2015; Messing and Campbell, 2016; Brignone and Gomez, 2017; Nesset et al., 2017; Richards et al., 2019; Sabri et al., 2019; Johnson et al., 2020; López-Ossorio et al., 2021). These aggressors are also included (Echeburúa et al., 2009; Storey and Hart, 2014; Cunha and Goalves, 2016; Nesset et al., 2017; Anderson et al., 2021; López-Ossorio et al., 2021; Williams et al., 2021). In some studies, professionals involved with the victims as advocates and police officers are considered sample as well (Grant and Cross-Denny, 2017; Dutton et al., 2018, 2019; Ward-Lasher et al., 2018).

3.2.3. Data Sources

Most of the studies used similar data collection strategies from interviews and questionnaires directly from victims (Campbell, 1986; McFarlane et al., 1998; Glass et al., 2008, 2009, 2010; Campbell et al., 2009; Snider et al., 2009; Messing et al., 2013, 2014, 2015b, 2016, 2017, 2020a; Bianchi et al., 2014; Wang, 2015; Brignone and Gomez, 2017; Richards et al., 2019; Sabri et al., 2019; Johnson et al., 2020), aggressors (Snider et al., 2009; Messing et al., 2015a; Cunha and Goalves, 2016; Williams et al., 2021) and professionals (Dutton et al., 2018, 2019; Ward-Lasher et al., 2018). One uses focus groups (Grant and Cross-Denny, 2017). Secondary data were also extracted from official records and reports of legal and police databases (Storey and Hart, 2014; Nesset et al., 2017; Ward-Lasher et al., 2018; Anderson et al., 2021; López-Ossorio et al., 2021).

3.2.4. Purpose of the Studies

The aims of the studies were diverse in content. The majority are focused on developing risk assessment instruments for IPF as well as analyzing their validity (Campbell, 1986; Campbell et al., 2009; Echeburúa et al., 2009; Snider et al., 2009; Messing et al., 2013, 2015a, 2017, 2020a; Storey and Hart, 2014; Wang, 2015; Messing and Campbell, 2016; López-Ossorio et al., 2021). There are several that assess the implications of them into professional practice (Glass et al., 2010; Messing et al., 2014, 2015b, 2016; Grant and Cross-Denny, 2017; Nesset et al., 2017; Dutton et al., 2018, 2019; Ward-Lasher et al., 2018; Richards et al., 2019; Sabri et al., 2019; Anderson et al., 2021; Williams et al., 2021). A few examine the risk factors of IPF using the existing risk assessment instruments (McFarlane et al., 1998; Glass et al., 2008, 2009; Bianchi et al., 2014; Cunha and Goalves, 2016; Brignone and Gomez, 2017; Johnson et al., 2020).

3.3. Main Findings

The risk assessment instruments for IPF detected are Danger Assessment (DA), Danger Assessment for Immigrants (DA-I), Danger Assessment for Law Enforcement (DA-LE), Danger Assessment-5 (DA-5), the Taiwan Intimate Partner Violence Danger Assessment (TIPVDA), the Severe Intimate Partner Risk Prediction Scale (SIVIPAS), the Lethality Screen, and the H-Scale. **Table 2** contains descriptions and psychometric properties related to the reliability and validity of these instruments. **Figure 2** provides an overview of the number and content of the risk factors of said instruments.

3.3.1. Brief Description

The DA (Campbell, 1986) is the first risk assessment instrument to assist women victims in estimating their danger of homicide or severe injury by current or former male partners. It was originally developed based on a review of scientific literature on risk factors for IPF and serious injuries from PVW, expert knowledge, and information from abused women (Campbell, 1986). Later studies examined the instrument with abused women, using updated versions (Campbell et al., 2009; Storey and Hart, 2014; Messing et al., 2020a). These women did not die, but most of them suffered near-fatal violence, so the outcome measure of the DA is not considered IPF but rather an attempted

TABLE 1 | Characteristics of the included studies in the systematic review.

Studies	Study location	Sample of the study	Data source of the study	Study purpose related with the tools
Messing et al. (2015a)	USA	254 victims of PVW	Structured interviews, the Lethality Screen (Messing et al., 2015a), the Danger Assessment (DA) (Campbell et al., 2003, 2009) and the revised Conflict Tactics Scale (CTS-2) (Straus et al., 1996)	To examine the predictive validity of the Lethality Screen
Messing et al. (2020b)	USA	959 victims of PVW and attempted IPF	Structured interviews and the DA (Campbell et al., 2003, 2009)	To develop and testing the Danger Assessment for Law Enforcement (DA-LE)
Richards et al. (2019)	USA	141 victims of PVW seeking legal aid service	The Lethality Assessment Program (LAP), the CTS2 (Straus et al., 1996), the Safety Promoting Behavior Checklist (McFarlane et al., 2004) and the Personal Progress Scale-Revised (PPS-R) (Johnson et al., 2005)	To assess whether receiving the LAP -including the Lethality screen and the Lethality Assessment Protocol- impact on women's awareness risk for severe violence or homicide and empowering to self-protective measures and seek professional services
Sabri et al. (2019)	USA	1250 immigrant, refugee, and indigenous victims of PVW	The CTS-2 (Straus et al., 1996), the Patient Health Questionnaire (PHQ-9) (Kroenke et al., 2001), the Harvard Trauma Questionnaire (Mollica et al., 1992), the PPS-R (Johnson et al., 2005), and the Measure of Victim Empowerment Related to safety (MOVERS) scale (Goodman et al., 2015)	To test the effectiveness of two cultural versions of the Safety Planning Interventions ("myPlan") to immigrant, refugee and indigenous populations. Them are entitled "weWomen" for immigrant and refugee populations, and "OurCircle" for indigenous populations. These versions are integrated by an adapted version of DA to these populations, developing safety interventions to women victims based on the PVW and IPF risk
Glass et al. (2009)	USA	209 victims of PVW	The DA (Campbell et al., 2003)	To determine typologies of PVW/IPF survivors based on known risk factors of the phenomenon
Glass et al. (2008)	USA	53 victims of PVW and 23 victims of IPF	The DA (Campbell, 1986)	To identify risk factors of IPF in young adult population
McFarlane et al. (1998)	USA	199 pregnant victims of PVW	The Index of Spouse Abuse (ISA) (Hudson and McIntosh, 1981), the DA (Campbell, 1986), and the Severity of Violence Against Women Scale (SVAWS) (Marshall, 1992)	To examine the severity of PVW in pregnant women victims and its association with gun access by the aggressor
Dutton et al. (2018)	USA	16 professionals of social service agencies who administer LAP in PVW cases	Semi-structured interviews	To assess the experiences and perceptions of domestic violence agency professionals with the LAP
Grant and Cross-Denny (2017)	USA	22 police officers that administer LP in their departments	Focus groups	To explore the attitudes and barriers of police officers to a successful implementation of LAP
Messing et al. (2016)	USA	648 victims of PVW	Semi-structured interviews	To analyze the applications of the LAP to women victims of PVW/IPF
Johnson et al. (2020)	USA	213 women victims of PVW and attempted IPF	The DA (Campbell et al., 2009), the Abusive Behavior Inventory-Revised (ABI-R) (Postmus et al., 2016b), the National Intimate Partner and Sexual Violence Survey (Thompson, 2006), the SVAWS (Marshall, 1992), the Scale of Economic Abuse-12 (Postmus et al., 2016a), the National Intimate Partner and Sexual Violence Survey (Thompson, 2006), the Safety Rating Scale (Culbertson et al., 2001), and the Violence Against Women Survey (Macmillan et al., 2000)	To detect fatality risk indicators of IPF
Dutton et al. (2019)	USA	168 police officers and 63 victim advocates of domestic violence agencies who administer the LAP	Modified version of officer survey and advocate survey (Maryland Network Against Domestic Violence)	To assess experiences and perceptions of police officers and victim advocates in the collaboration to apply the LAP

(Continued)

TABLE 1 | Continued

Studies	Study location	Sample of the study	Data source of the study	Study purpose related with the tools
Ward-Lasher et al. (2018)	USA	266 police-involved victims of PVW	Official police records, interviews, the CTS-2 (Straus et al., 1996) and the DA (Campbell et al., 2003)	To examine police officers' decisions to make arrests in PVW/IPF cases based on violence and homicide risk assessment
Brignone and Gomez (2017)	USA	263 women patients of emergency departments (including victims of PVW)	The DA (Campbell et al., 2009)	To identify the women who visit emergency departments at highest risk of IPF
Messing and Campbell (2016)	USA	549-570 victims of PVW	The Lethality Screen (Messing et al., 2015a) and the DA-LE (Messing and Campbell, 2016)	To analyze the predictive validity of the Lethality Screen and the DA-LE
Messing et al. (2015b)	USA	1252 victims of PVW	Structured interviews, an adapted version of the safety-promoting behavior checklist (McFarlane et al., 2004), the CTS-2 (Straus et al., 1996), the DA (Campbell, 1986) and the Lethality Screen (Messing et al., 2015a)	To assess the effectiveness of the LAP used by police-social services on victim-survivors at risk of PVW/IPF to the adoption of safety strategies
Messing et al. (2014)	USA	432 women victims of PVW	Structured interviews, the DA (Campbell et al., 2003), the CTS2 (Straus et al., 1996), the women's experience of battering scale (Smith et al., 1995), and an adapted version of the safety-promoting behavior checklist (McFarlane et al., 2004)	To study the connection of homicide risk and safety actions among women victims of PVW
Messing et al. (2013)	USA	148 immigrant victims of PVW	Structured interviews, the CTS-2 (Straus et al., 1996), the DA (Campbell et al., 2009), the Women's Experience of Battering Scale (Smith et al., 1995) and the HARASS Scale (Sheridan, 1998)	To adapt the DA to immigrant women population
Messing et al. (2020a)	USA	1008 women victims of PVW	Structured interview, the DA (Campbell et al., 2003, 2009), and the Danger Assessment for Immigrants (DA-I) (Messing et al., 2013)	To examine the relationship between strangulation, loss of consciousness due to strangulation, and risk of future near-fatal violence to modify the DA and the DA-I
Bianchi et al. (2014)	USA	300 victims of PVW	The DA (Campbell, 1986) and the SAVAWS (Marshall, 1992)	To describe the demographics, frequency, severity of abuse, and the risk of murder for women who are abused during pregnancy in comparison with non-pregnant women
Campbell (1986)	USA	79 victims of PVW	Interviews, The CT (Straus, 1979) and the DA (Campbell, 1986)	To develop the DA to assess the danger of IPF and describing the literature supporting it
Anderson et al. (2021)	USA	88 male offenders of PVW/IPF (37 monitoring offenders and 51 non-monitoring offenders)	Official data from Domestic Violence High-risk Team Monitoring (DVHRT) and the LAP (Maryland Network Against Domestic Violence)	To analyze the association between the LAP and DVHRT and prosecution and sentencing outcomes of PVW/IPF offenders
Storey and Hart (2014)	Canada	100 cases of PVW	File review of the cases from the British Columbia Courts Services database and using the Spousal Assault Risk Assessment Guide (SARA) (Kropp, 1994), the DA (Campbell et al., 2009), the Ontario Domestic Assault Risk Assessment (ODARA) (Hilton et al., 2004), the Brief Spousal Assault Form for the Evaluation of Risk (B-SAFER) (Kropp et al., 2005)	To assess the validity of the DA
López-Ossorio et al. (2021)	Spain	2159 cases of PVW/IPF (2000 cases of PVW and 159 cases of IPF)	Official data from the VioGén System which collect and manage national information of intimate partner violence against women cases	To develop and validate a new scale to improve intimate partner homicide prediction
Nesset et al. (2017)	Norway	124 cases of PVW	Police reports data on emergency visits in cases of PVW/IPF and a Norwegian translation of the original Swedish version of the B-SAFER (Kropp et al., 2011)	To appraise the associations between of risk assessment and immediate protective actions by police as arrest and relocation of victims

(Continued)

TABLE 1 | Continued

Studies	Study location	Sample of the study	Data source of the study	Study purpose related with the tools
Cunha and Goalves (2016)	Portugal	172 male aggressors (137 of PVW and 34 of IPF)	The SARA (Kropp et al., 1999)	To explore the differences between PVW and IPF and to identify the specific variables that predict IPF
Messing et al. (2017)	USA	1081 victims of PVW and attempted IPF	Structured interviews, the CTS-2 (Straus et al., 1996) and the Danger Assessment-5 (DA-5) (Snider et al., 2009)	To assess the predictive validity of the DA-5 adding a strangulation item to estimate the risk of attempted IPF
Wang (2015)	China	543 victims of PVW and attempted IPF	The Lethal Assault Checklist and the Taiwan Intimate Partner Violence Danger Assessment (TIPVDA) (Wang, 2012)	To evaluate the predictive validity of the TIPVDA to predict IPF
Glass et al. (2010)	USA	90 women victims of PVW	Structured interviews, the Decisional Conflict Scale (DSC) (O'Connor, 1995), the DA (Campbell et al., 2009)	To create and test a computerized safety decision aid for setting a protection plan to the risk for PVW
Campbell et al. (2009)	USA	310 IPF, 194 attempted IPF, 324 PVW cases	Structured interviews and the DA (Campbell, 1986; Campbell et al., 2003)	To develop and validate a weighted scoring for the DA-revised
Williams et al. (2021)	USA	4,665 men aggressors of PVW	The Domestic Violence Screening Instrument-Revised (DVSI-R) (Williams and Grant, 2006) and the DA (Campbell et al., 2009)	To determine the validity of a dual assessment protocol for persistence and potential lethality in PVW
Snider et al. (2009)	USA	666 victims of PVW of whom 400 completed follow-up interviews	Structured interviews and the DA (Campbell et al., 2009)	To design a risk assessment of severe violence or IPF for healthcare settings
Echeburúa et al. (2009)	Spain	269 men aggressors of IPF and attempted IPF, and 812 cases of PVW	Interviews and the Severe Intimate Violence Partner Prediction Scale (SIVIPAS) (Echeburúa et al., 2009)	To develop a scale that predict IPF and attempted IPF

IPF. Only one study of the updated version also included IPF cases. The DA has been adapted to a culturally competent risk assessment instrument for abused immigrant women based on information from representative victims. This instrument is named DA-I (Messing et al., 2013) and its outcome measure is the prediction of any PVW and severe violence, including attempted IPF (Messing et al., 2013). A subsequent study updated this instrument, focusing on the prediction on attempted IPF (Messing et al., 2020a). The DA has also been adapted to abused Chinese women referred to TIPVDA (Wang, 2015), being its outcome measure attempted IPF too (Wang, 2015).

The DA has not only been adapted to specific populations but also different contexts such as law enforcement known as DA-LE (Messing and Campbell, 2016; Messing et al., 2020b). It is conceived to be used by professionals involved in PVW cases as domestic violence practitioners and police officers, as a risk-informative tool to identify high-risk PVW cases and intervene if needed. This instrument was developed using the information received from PVW battered women, some of whom have suffered near-lethal violence. Thus, the DA-LE has the outcome measure of predicting attempted IPF (Messing and Campbell, 2016; Messing et al., 2020b). The DA has been adapted to the healthcare area as well, being termed DA-5 (Snider et al., 2009). It is a brief risk assessment for acute care settings that intend to identify battering women at risk of severe injury or near-lethal violence by intimate partners. Thus, the outcome measure is to predict attempted IPF based on previous information compiled by battered women, including survivors of IPF. A later study updated this version centered on this outcome too (Messing et al., 2017). The Lethality Screen (Messing et al., 2015a; Messing and Campbell, 2016) is another adaptation of the DA for first responders that are involved in PVW cases as risk-informed collaborative interventions. It was created to identify high-risk victim-survivors. This was developed with battered women, including near-fatal violence and severe violence, but not homicide cases. Thus, its outcome measure is attempted IPF (Messing et al., 2015a; Messing and Campbell, 2016). Additionally, there is a program named the Lethality Assessment Program (LAP) composed of the Lethality Screen and the Lethality Assessment Protocol. It not only allows detecting victims in danger but also connects them with professionals to conduct an intervention to prevent the fatal result (Messing et al., 2015a; Messing and Campbell, 2016).

There are instruments independent of the DA that are SIVIPAS (Echeburúa et al., 2009) and H-Scale (López-Ossorio et al., 2021). Both are scales and have as measure the prediction of IPF in distinction with non-serious and non-lethal violence. SIVIPAS is also sensible for attempted IPF. Thus, these are used by the police, judicial, and social services professionals (Echeburúa et al., 2009; López-Ossorio et al., 2021).

3.3.2. Number and Content of Risk Factor Items

The risk factors items of the instruments have been changing in number and content over time. It is presented in **Figure 2** and elaborated in the following paragraphs.

The original version of the DA (Campbell, 1986) has 15 risk factors of IPF. These include: escalation of frequency and severity of violence; presence of armed guns in the house; sexual abuse;

TABLE 2 | Risk asssessment instruments for IPF.

Instruments	References	Definition	Items	Outcome assessed	Reliability	Validity
The original DA	Campbell, 1986	It is an instrument that assess the danger of homicide in women by their intimate current or former partner	15	Attempted IPF	Cronbach's α = 0.71	Construct validity = significant correlation between DA and related constructs of severity-weighted index (r = 0.55; Probability[P] = 0.000), severity of worst injury (r = 0.50; P = 0.000) and severity of violent tact used against woman (r = 0.43; P = 0.000)
The updated version of DA	Campbell et al., 2009; Storey and Hart, 2014	It is an adapted version of the DA including additional risk factors of homicide against women by intimate partners	20	IPF and attempted IPF	Intraclass correlation coefficient = 0.83	AUC = 0.916(p<0.001; 95% Confidence Interval[CI]0.892 to 0.941). Sensitivity = 0.79. Specificity = 0.86/ AUC for a specific subset who had previously interfaced with a criminal justice, health care or victims' service agency = 0.862(p<0.001; 95% CI 0.812 to 0.913). Sensitivity for the mentioned subset = 0.82. Specificity for the mentioned subset = 0.76
The recent updated version of DA	Messing et al., 2020a	It is an updated version of the DA including an additional risk factor of homicide against women by intimate partners	20	Attempted IPF	Not reported	AUC = 0.70 (95% CI 0.638 to 0.751)[1] and 0.71 (95% CI 0.638 to 0.774)[2]. Sensitivity = 0.69[1] and 0.75[2]. Specificity = 0.56[1] and 0.62[1]. PPV = 0.20[1] and 0.60[2]. NPV = 0.89[1] and 0.93[2]
The DA-I	Messing et al., 2013	It is a version of the DA adapted to immigrant women population	26	Any IPW and severe violence including attempted IPF	Not reported	AUC of severe violence = 0.85. AUC of any violence = 0.78
The updated version of the DA-I	Messing et al., 2020a	It is an updated version of the DA including an additional risk factor of homicide against immigrant women by intimate partners	Not reported clearly	Attempted IPF	Not reported	AUC = 0.838 (95% CI 0.748 to 0.928). Sensitivity = 0.86. Specificity = 0.63. PPV = 0.28. NPV = 0.96
The DA-LE	Messing and Campbell, 2016; Messing et al., 2020b	It is a version of the DA adapted to law enforcement context	11	Attempted IPF	Cronbach's α 0.75[3]-0.76[4]	AUC = 0.69 (95% CI 0.6139–0.7590)[3]. AUC = 0.75 (95% CI = 0.6785–0.8246)[4]. Sensitivity = 0.53[3] and 0.65[4]. Specificity = 0.72[3] and 0.77[4]. PPV = 0.16[3] and 0.28[4]. NPV = 0.94[3 4]
The DA-5	Snider et al., 2009	It is a brief version of the DA adapted to healthcare settings	5	Attempted IPF	Not reported	AUC = 0.79 (95% CI 0.73 to 0.85). Sensitivity = 0.83. Specificity = 0.56. PPV = 0.25. NPV = 0.95
The updated version of DA-5	Messing et al., 2017	It is an updated version of the DA-5 modifying risk items	5	Attempted IPF	Not reported	AUC = 0.69 (95% CI = 0.63 to 0.75). Sensitivity = 0.74, Specificity = 0.53, PPV = 0.19, NPV = 0.93
The TIPVDA	Wang, 2015	It is a version of the DA adapted to Chinese context	15	Attempted IPF	Cronbachs α = 0.73 - 0.77	AUC for predict both current and past lethal assault = 0.86. AUC for predict current lethal assault with no past = 0.72. AUC for predict past lethal assault with no current = 0.80. AUC for predict both current and past lethal assault, current lethal assault with no past, and past lethal assault with no current = 0.78
The SIVIPAS	Echeburúa et al., 2009	It is an instrument that identifying women victims of PVW who are at risk for attempted homicide and homicide by their intimate current or former partner	20	IPF and attempted IPF	Cronbachs α = 0.71	Sensitivity = 0.48. Specificity = 0.81

(Continued)

TABLE 2 | Continued

Instruments	References	Definition	Items	Outcome assessed	Reliability	Validity
The Lethality Screen	Messing et al., 2015a; Messing and Campbell, 2016	It is an adaptation of the DA developed for first responders to predict severe violence and homicide in PVW cases	11	Near fatal violence (attemped IPF), severe violence, any PVW, and abuse	Not reported	Sensitivity for near fatal violence = 0.93. Specificity for near fatal violence = 0.21. PPV for near fatal violence = 0.13. NPV for near fatal violence = 0.96 / Sensitivity for severe violence = 0.93. Specificity for severe violence = 0.22. NPV for severe violence = 0.93. PPV for severe violence = 0.22 / Sensitivity for any PVW = 0.87. Specificity for any PVW = 0.22. NPV for any PVW = 0.80. PPV for any PVW = 0.32 / Sensitivity for abuse = 0.84. Specificity for abuse = 0.24. NPV for abuse = 0.48. PPV for abuse = 0.64 / Sensitivity = 0.57. Specificity = 0.56
The H-Scale	López-Ossorio et al., 2021	It is an instrument that estimate the risk of women homicide by their intimate current or former partner	13	IPF	Not reported	AUC = 0.81(95% IC 0.76 to 0.86)[5]. AUC = 0.80 (95% IC 0.74 to 0.86)[6]. Sensitivity = 0.81[5] and 0.84[6]. Specificity = 0.61[5] and 0.60[6]. PPV = 0.19 [5,6]. NPV = 0.97[5,6]

1: It is a subset used to develop an updated version of the DA.
2: It is a subset used to validate the updated version of the DA.
3: It is a subset used to develop the DA-LE.
4: It is a subset used to validate the DA-LE.
5: It is a subset used to develop the H-Scale.
6: It is a subset used to validate the H-Scale.

batterer abuses drugs and/or daily intoxication; violent outside the house; death threats or her belief in that he is capable of it; controlling all aspects of her life; violent jealousy; physical violence during pregnancy; abuses toward the couple's children; suicide threats or attempts by the victim; economic incomes below the poverty line; minority group membership; and women age between 15 and 34 years (Campbell, 1986). The updated versions of DA (Campbell et al., 2009; Storey and Hart, 2014; Messing et al., 2020a) contain 20 items, being the last three items not included. Other modifications were introduced as a specification of the physical violence escalation; and guns in the house was replaced for aggressor possesses his own guns. Other items were added, including: she left him after living together; he is unemployed; he uses weapons against her; he threatened her with a lethal weapon; he avoided being arrested for domestic violence; the woman has children that are not his; he tried to strangle or choke her multiple times resulting in loss of her consciousness; he is an alcoholic or problematic drinker; he threatened or tried to commit suicide; he threatened her to harm her children; and he stalked her (Campbell et al., 2009; Storey and Hart, 2014; Messing et al., 2020a). The instrument incorporates four levels of danger depending on how many items are checked out to be true. These are variable danger (less than 8 items), increased danger (8–13), severe danger (14–17), and extreme danger (18 and above) (Campbell et al., 2009; Storey and Hart, 2014).

The DA-I (Messing et al., 2013) has 26 items, most of them from the DA. Those not included in the DA are: possessing own guns; she left him after living together; battered use of drugs; and he controls all aspects of her life. Additional risk factors specific to immigrant women were added, such as her language preference to answer questions; she is married to the aggressor; they have children in common or not; she has college, vocational school, and/or graduate school degrees; she hides the truth from others because of fear of him; he obstacles her school attendance, getting job training or learning English; he threatened to report her to Child Protective Services, immigration, or other authorities; she feels ashamed of things he does; and he was born in the United States. These items have different weights. Death threats; violently jealous aggressor; no kids in-home; no common children; and victim shaming have the highest weights. The lowest weight items are: she believes that he is capable of killing her; battering during pregnancy; aggressor suicide threats or attempts; avoidance of being arrested for domestic violence; stalking; the language of the interview; victims hide the truth from others; and high education (Messing et al., 2013). The updated version of the DA-I has no substantial modifications (Messing et al., 2020a). The four levels of danger are maintained except for changes on the scores included in each: variable danger (less than 14), increased danger (15–25), severe danger (26–35), and extreme danger (36 and above) (Messing et al., 2013).

The TIPVDA (Wang, 2015) has 15 items eliminating some included in the DA, which are aggressor possess own guns; women left him after living together; unemployment; non-common children; use of drugs; and aggressor and victim suicide threats or attempts. This instrument includes new threats to women if she separated, divorced, sought professional help, or filed an order of protection; aggressor physically hurt other people; and experiencing financial stress or difficulties. More than eight affirmative responses to items of 15 are considered

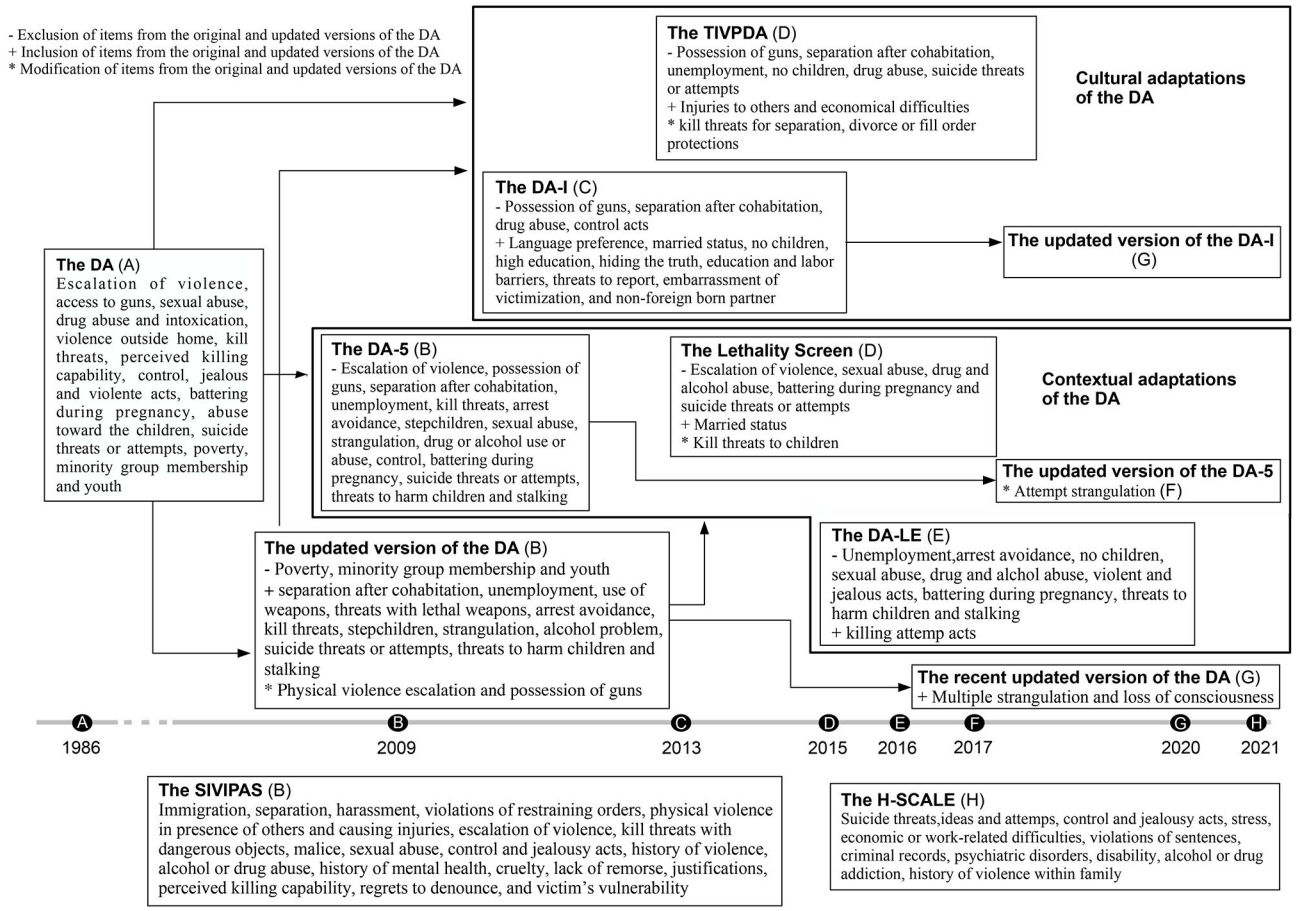

FIGURE 2 | Evolution of the instrument's risk factors items.

high-risk (Wang, 2015). The DA-LE (Messing and Campbell, 2016; Messing et al., 2020b) includes 11 items from the DA, but removing unemployment; avoidance of being arrested for domestic violence; non-common children; sexual abuse; use of drugs; alcohol or problematic drinker; violent and constant jealousy; battering during pregnancy; threats to harm children; and stalking. The item batterer tried to kill woman has also been integrated into the tool. Each affirmative answer to the items has been assigned one point, establishing this instrument high-risk cases above a score of 7 out of 11 (Messing and Campbell, 2016; Messing et al., 2020b).

The Lethality Screen (Messing et al., 2015a; Messing and Campbell, 2016) is also integrated by 11 items from DA with some modifications. The item threats to hurt children is replaced for threats to kill them. One new item is if she is married to him. Deleted items are: escalation of violence; sexual abuse; use of drugs, alcoholic or problematic drinker; battering during pregnancy; and women with suicide threats or attempts. It establishes two levels of risk based on the affirmative responses: not serious danger (less than 7) and high danger (7 and above) (Messing et al., 2015a; Messing and Campbell, 2016). The DA-5 (Snider et al., 2009) is another brief version of DA with a total of 5 items. The items are from DA, but only include the escalation of physical violence in frequency and severity; use of weapons; her believing that he is capable of killing her; battering during pregnancy; and violent jealousy, excluding the rest (Snider et al., 2009). The updated version of the DA-5 introduces attempted strangulation in replacement for battering during pregnancy (Messing et al., 2017). The presence of at least 3 out of 5 affirmative answers is considered high-risk (Snider et al., 2009; Messing et al., 2017).

The SIVIPAS (Echeburúa et al., 2009)is not based on the items from DA, integrating 20 items. Some of them are similar to the included in the DA as separation; harassment; escalation of violence; severe or kill threats; threats with dangerous objects or weapons; sexual abuse; intense jealousy or controlling behaviors; abuse of alcohol and/or drugs; and victim perception of the danger of death. The specific items included are man or woman immigrant; breaking restraining orders; physical violence in the presence of others and that cause injury; intention of causing severe injuries; history of violence against other people including previous partners; man with mental illness and dropping out of psychiatric or psychological treatments; cruel; disparaging behaviors; lack of remorse; justification of violent behavior;

victim attempts to drop charges or goes back on her decision to either leave or report the aggressor to the police; victim's vulnerability because of illness; solitude or dependence. It defines three levels of risk depending on the affirmative responses to items: low (less than 4), moderate (5–9), and high (10 and above) (Echeburúa et al., 2009). The H-Scale (López-Ossorio et al., 2021) is another instrument developed independently from the DA. It has 13 items, including victim and aggressor suicide threats and attempts; exaggerated jealousy and controlling; and economic or work-related problems similar to the included on the DA. Problems in aggressor life stressful; physical or sexual aggression records; past breakings of sentence conditions; victim and aggressor mental or psychiatric disorder; victim with any disability or addiction in drugs or alcohol; and aggressor history of gender or domestic violence within victim's family. It has five levels of risk based on the presence or absence of items: unappreciated, low, medium, high, and extreme (López-Ossorio et al., 2021).

3.3.3. Reliability and Validity

Only five studies focused on the reliability of the instruments, assessing four of the internal consistency reliability using Cronbach's α and one interrater reliability with intraclass correlation. These studies reported a Cronbach's α of 0.71 for the original DA (Campbell, 1986), 0.75–0.76 for the DA-LE (Messing and Campbell, 2016; Messing et al., 2020b), 0.73–0.77 for TIPVDA (Wang, 2015), and 0.71 for SIVIPAS (Echeburúa et al., 2009); and an intraclass correlation coefficient of 0.83 for the updated version of the DA (Storey and Hart, 2014). All studies examine criterion-related validity through predictive validity, including AUC-ROC, sensitivity, specificity, PPV, and NPV, except one study that exclusively assesses construct validity. This measure was issued for the original DA revealing a significant correlation between this instrument and construct of the severity-weighted index (r = 0.55), the severity of worst injury (r = 0.50), and severity of violent tact used against women (r = 0.43) (Campbell, 1986). The predictive validity of all instruments is not comparable due to the heterogeneity of the outcomes assessed, being analyzed by separated categories.

Firstly, the instruments that predict attempted IPF (**Table 2**) have an AUC ranging from 0.680 to 0.916. It included 0.695 to 0.706 for the recent updated version of DA (Messing et al., 2020a), 0.775–0.852 for the DA-I (Messing et al., 2013), 0.838 for the updated version for the DA-I (Messing et al., 2020a), 0.686–0.752 for the DA-LE (Messing and Campbell, 2016; Messing et al., 2020b), 0.79 for the DA-5 (Snider et al., 2009), 0.69 for the updated version of DA-5 (Messing et al., 2017), 0.718–0.856 for the TIPVDA (Wang, 2015). There is not information of the AUC for the Lethality Screen (Messing et al., 2015a; Messing and Campbell, 2016).

The sensitivity and specificity of these instruments are based on cut-point scores. The recently updated version of DA has a sensitivity ranging from 0.69 to 1, and a specificity from 0 to 0.62, being both more balanced in the extreme danger level (cutoff score of 18 and above) with a sensitivity of 0.69 and 0.75 (for training and test samples, respectively) and specificity of 0.56 and 0.62 (for training and test samples, respectively) (Messing et al., 2020a). Sensitivity and specificity data for the DA-I has not been identified (Messing et al., 2013), but there is data for the updated version of the DA-I: the sensitivity varies from 0.29 to 1, and specificity ranges from 0.97 to 0, being the most balanced in the severe danger level (cutoff score between 26 and 35) with a sensitivity of 0.86 and specificity of 0.63 (Messing et al., 2020a). The DA-LE has a sensitivity ranging from 0.39 to 1 and specificity from 0 to 1, being both maximized at the cutoff score of 7 with a sensitivity between 0.53 and 0.65 (for training and test samples, respectively) and a specificity between 0.72 and 0.77 (for training and test samples, respectively) (Messing and Campbell, 2016; Messing et al., 2020b). The sensitivity of the DA-5 ranged from 0.83 to 1 and the specificity from 0.15 to 0.56, being both maximized at the score 3 with a sensitivity of 0.83 and specificity of 0.56 (Snider et al., 2009). The updated version of the DA-5 has a sensitivity range from 0.25 to 0.96 and specificity from 0.13 to 0.92, being the most balanced in at the score 3 with a sensitivity of 0.74 and specificity of 0.53 (Messing et al., 2017). The sensitivity and specificity of the Lethality Screen are not clear due to studies showing different data. One of them reports a sensitivity of 0.93 and specificity of 0.21, not showing cut-points (Messing et al., 2015a). Another one reveals a cutoff score but not a point at which both be balanced, with a high sensitivity observed at low specificity, and vice versa. However, it is observed that the maximum equilibrium is at the score of 7 with a sensitivity of 0.57 and specificity of 0.56 (Messing and Campbell, 2016).

PPV and NPV were less common measures of predictive validity, being reported in a few instruments. For the recently updated version of DA, the PPV was varied from 0.13 to 0.60 and the NPV from 0 to 0.93, depending on the cutoff scores. For the extreme danger level score (balanced rating of sensitivity and specificity cutoff), the PPV was around 0.20 and 0.60 (for training and test samples, respectively), and the NPV of 0.89 and 0.93 (for training and test samples, respectively) (Messing et al., 2020a). The updated version of the DA-I has a different PPV and NPV based on the cut-points ranging the first from 0.14 and 0.60 and the second from 0 and 0.89. The most balanced sensitivity and specificity of this instrument were in the severe danger level, which has a PPV of 0.28 and NPV of 0.96 (Messing et al., 2020a). The DA-LE has a PPV ranging from 0.90 to 1 and a NPV from 0 to 0.93, being the sensitivity and specificity maximized at the cutoff score of 7, which PPV is between 0.16 and 0.28 (for training and test samples, respectively) and NPV is 0.94 (same for training and test samples) (Messing and Campbell, 2016; Messing et al., 2020b). The DA-5 has a PPV ranging from 0.17 to 0.57 and a NPV from 0.88 to 1, being the sensitivity and specificity maximized at the cutoff score of 3, which PPV is 0.25 and NPV is 0.95 (Snider et al., 2009). The updated version of DA-5 has a PPV ranging from 0.14 to 0.31 and a NPV from 0.89 to 0.96, being the sensitivity and specificity also maximized at the cutoff score of 3, which PPV is 0.19 and NPV is 0.93 (Messing et al., 2017). The Lethality Screen has a PPV of 0.13 and a NPV of 0.96 (Messing et al., 2015a; Messing and Campbell, 2016).

Secondly, for predicting both IPF and attempted IPF, there is the first updated version of the DA and the SIVIPAS. The updated version of DA has an AUC of 0.913-0.916. Its sensitivity ranged

from 0.55 to 0.99 and the specificity from 0.53 to 0.97 across the DA danger level scores, being both maximized at the severe danger level (cutoff score between 14 and 17) with a sensitivity of 0.79 and specificity of 0.86. PPV and NPV have not been reported for this instrument (Campbell et al., 2009). SIVIPAS has a specificity ranging from 0 to 0.138 to 1 and a specificity from 0 to 1, being the ten cutoff score a sensitivity of 0.48 and specificity of 0.81. There are no AUC, PPV, or NPV data for this instrument (Echeburúa et al., 2009).

Thirdly, to predict IPF, the H-Scale is used, which has an AUC is 0.81 for the training sample and 0.80 for the test sample. The sensitivity is 0.81 for the training sample and 0.84 for the test sample, whereas the specificity is 0.61 for the training sample and 0.60 for the test sample. PPV is 0.19 and NPV is 0.97 (López-Ossorio et al., 2021).

Based on the instruments above' predictive capacity for IPF and attempted IPF, they are considered predictive models.

3.4. Quality Assessment Results

3.4.1. Quality Results of the Search Strategy

The latent semantic analysis reveals that the combination of the keywords piloted in the databases allowed the identification of studies that respond to the research questions of the systematic review, being an indicator of the quality of the search strategy used. The mentioned analysis was carried out based on 26 studies of 33 due to the presence of keywords. These studies are grouped into three factors by associating the specific research themes included in the terms.

Factor 1 includes 16 studies that represent two thematic areas. First, 11 studies focused on analyzing risk factors for severe PVW and IPF and modifying some of them the existing risk assessment instruments according to the obtained fatality risk indicators. Second, five studies analyze the effect of applying risk assessment instruments and safety programs on victims' safety. The common theme of all studies included in factor 1 is the generation of scientific knowledge of the risk factors of severe PVW and IPF and the instruments and programs detecting and preventing it. The set of keywords of the 16 studies is semantically close, representing the mentioned common theme of factor 1. These keywords account for 61.54% of the variance attributable to the factor.

Factor 2 involves seven studies with two thematic areas. First, five studies test risk assessment instruments. Second, two studies examine the implementation of risk assessment and safety programs in daily professional practice. The common element of the studies included in factor 2 is the application of scientific knowledge to improve existing risk assessment instruments and protective programs. The group of keywords of the seven studies semantically close elements accounts for 26.92% of the variance attributable to the factor.

Factor 3 presents three studies with two thematic areas. First, two studies develop risk assessment instruments and safety programs adapted to specific areas and populations. Second, 1 study assesses the link between detecting lethal risk cases and the offender prosecution outcomes. The central theme of all the studies included in factor 3 is the expansion of knowledge and application in managing severe PVW and IPF. The set of keywords of the three studies for a total of 11.54% of the variance attributable to the factor.

The specific keywords identified in the studies refer to violence within intimate relationships, severe violence and homicide, and risk assessment instruments. The principal terms related to the violence within relationships used are "domestic violence" and "intimate partner violence"; related to severe violence homicide used are "homicide," "lethality," "lethal intimate partner violence," "intimate partner homicide," "intimate partner femicide," "femicide," and "spousal homicide." Those related to risk assessment instruments of severe violence and homicide are "assessment," "risk assessment," "lethality assessment," and "risk of murder." These keywords are detected in the three factors and distinguished as the most explanatory of the variance in each factor. In particular, the most explanatory keywords of factor one are "intimate partner homicide," "homicide," "domestic violence," "femicide," "risk assessment"; factor two are "lethality assessment program," "homicide," "risk assessment," "intimate partner homicide"; and of factor three are "intervention," "lethality assessment program," "intimate partner violence," "domestic violence," and "intimate partner homicide."

The mentioned keywords referred to violence within relationships, severe violence, homicide, and risk assessment instruments are used in the three factors, but they do not equally account for the variance of each one. These terms account for a higher variance for factor one, acquiring more strength represented by citations. At the same time, the terms are less cited for the papers with topics included in factors two and three due to their lower variance. Additionally, there are specific keywords for each factor common among several papers within the same factor. This contributes to each factor representing a different theme. The main keywords that differentiate factor 1 from the rest are "risk factors" and "safety planning." The main keyword differentiating factor 2 from the rest is "validity." The main keywords differentiating factor 3 from the rest are "indigenous" and "legal intervention."

3.4.2. Quality Results of the Studies

On the quality of the 33 studies included in the systematic review, the **Table 3** summarizes the quality scores of each one. The mean quality score is 21.03 of a possible 32. The standard deviation is 4.77 in the range of 14 and 31. These data indicate a medium-high quality. It reveals that the studies effectively determine objectives, participants recruitment, representative sample, outcomes, methods, measurement uniformity, and statistical tests. Most of the studies scored high in all elements of the selection bias, the first three elements of measurement bias, and the first element of reporting bias categories. The two elements of the reporting bias category have high scores, although not as marked as those above. This implies that the consideration of potential confounders and the generalization of results are adequate but not excellent. In contrast, most of the studies scored less on the last five elements of the measurement bias, the only element of the attrition bias, and the last three

TABLE 3 | Quality scores of the studies included in the systematic review.

	(A)					(B)						(C)	(D)				Score
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	
Messing et al. (2015a)	2	2	2	2	2	2	2	2	2	1	0	2	2	2	2	1	28
Messing et al. (2020b)	2	2	2	2	2	2	2	1	2	1	2	2	2	2	1	1	28
Richards et al. (2019)	2	2	2	2	2	2	0	0	2	1	0	2	2	0	2	2	23
Sabri et al. (2019)	2	2	2	2	2	2	0	0	2	2	0	1	2	0	2	2	23
Glass et al. (2009)	2	2	2	2	2	2	0	0	0	0	0	0	2	0	1	2	17
Glass et al. (2008)	2	2	1	2	2	2	0	0	0	0	0	0	2	0	1	1	15
McFarlane et al. (1998)	2	2	2	2	2	2	0	0	0	0	0	0	2	0	1	2	17
Dutton et al. (2018)	2	2	1	2	2	2	0	0	0	0	0	0	2	0	2	1	16
Grant and Cross-Denny (2017)	2	2	1	2	2	2	0	0	0	0	0	0	2	0	2	1	16
Messing et al. (2016)	2	2	2	2	2	2	0	0	0	0	1	0	2	0	0	2	17
Johnson et al. (2020)	2	2	2	2	2	2	0	0	0	0	1	0	2	0	1	2	18
Dutton et al. (2019)	2	2	2	2	2	2	0	0	0	0	2	0	1	0	0	2	17
Ward-Lasher et al. (2018)	2	2	2	2	2	2	0	0	2	2	0	2	2	0	1	2	23
Brignone and Gomez (2017)	2	2	2	2	1	2	0	0	0	0	2	0	0	0	0	2	15
Messing and Campbell (2016)	2	2	2	2	1	2	2	1	2	1	1	1	2	2	1	1	25
Messing et al. (2015b)	2	2	2	2	2	2	0	0	2	1	2	2	2	0	1	2	24
Messing et al. (2014)	2	2	2	2	2	2	0	0	0	0	2	0	2	0	1	2	19
Messing et al. (2013)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	31
Messing et al. (2020a)	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	1	30
Bianchi et al. (2014)	2	2	2	2	2	2	0	0	2	2	0	0	2	0	0	2	20
Campbell (1986)	2	2	1	2	2	2	2	1	0	0	0	0	1	0	2	1	18
Anderson et al. (2021)	2	2	1	2	2	2	0	0	0	0	2	0	2	0	2	2	19
Storey and Hart (2014)	2	2	1	2	2	2	2	2	1	2	1	0	2	2	2	1	26
López-Ossorio et al. (2021)	2	2	2	2	2	2	2	1	0	0	0	0	2	2	2	2	23
Nesset et al. (2017)	2	2	2	2	2	2	0	0	0	0	0	0	2	0	2	2	18
Cunha and Goalves (2016)	2	2	2	2	2	2	0	0	0	0	0	0	2	0	1	2	17
Messing et al. (2017)	2	2	2	2	2	2	2	1	2	2	1	2	2	2	1	1	28
Wang (2015)	2	2	2	2	2	2	2	1	0	0	0	0	2	0	2	1	20
Glass et al. (2010)	2	2	1	2	2	2	0	0	0	0	0	0	1	0	1	1	14
Campbell et al. (2009)	2	2	2	2	2	2	2	1	0	0	0	0	2	2	1	2	20
Williams et al. (2021)	2	2	2	2	2	2	0	0	1	1	0	0	2	0	1	2	19
Snider et al. (2009)	2	2	2	2	2	2	2	0	2	2	0	2	2	2	2	1	27
Echeburúa et al. (2009)	2	2	2	2	2	2	2	1	0	0	0	0	2	2	2	2	23

(A) Selection bias; (B) Measurement bias; (C) Attrition bias; (D) Reporting bias.
(a) Clear objectives.
(b) Participants were recruited in an acceptable way.
(c) Representative sample.
(d) Clear definition of outcome.
(e) Clear description of the methods.
(f) The outcome was measured in the same way across all participants.
(g) The tool was administered by professionals.
(h) Authors use multiple sources of information to score risk assessments.
(i) The follow-up period was sufficiently described and reported.
(j) The follow-up period was long enough.
(k) Missing data treatment.
(l) Drop-out rates were recorded; (m) Appropiate statistical tests.
(n) The predictive validity of the tests was reported.
(o) Potential confounders were taken into account.
(p) Generilizable results.

elements of the reporting bias categories. This means that the administration tool, use of multiple sources of information, follow-up, treatment of missing data, drop-out rates registration, and predictive validity record are acceptable.

4. DISCUSSION

The present systematic review established three research questions to synthesize the scientific knowledge of risk

assessment instruments for IPF: What are the specific risk assessments instruments for IPF?, What are the risk factors for IPF included in the instruments? And what are the reliability and validity of the instruments? The findings respond to them and are discussed in the following paragraphs.

Addressing the first research question, the instruments for IPF are identified in different studies included in the systematic review. The quality search strategy allowed us to obtain fundamental studies to comprehensively understand these instruments. It is an innovative aspect in this review since no quality assessment of the strategy has been identified in other studies in the area. In the study selection process, a high number of them didn't meet the inclusion criteria and were excluded. In the field of risk assessment, it is not common to use specific keywords to refer to violence against women by current or former male partners, so we used general terms related to intimate partner violence and homicide across the different databases, proceeding from general partner violence to particular partner violence against a specific gender. In some studies included, different terms were detected to refer to PVW and IPF, such as "intimate partner violence against women" and "intimate partner femicide." The greater integration of these terms in the studies on the matter is essential to facilitate the identification of these studies and promote more visibility of violence against women. In addition, the quality assessment of the included studies allows the analysis of the risk of bias, not being an judgment on how good or bad they are.

Regarding study characteristics results, research on risk assessment instruments for IPF over time with updates and cultural and contextual adaptations is observed. However, most of the studies have been carried out in the United States, making it difficult to extrapolate the findings equally to all parts of the world, hence the need for further research in other countries. In addition, the analysis of the studies' characteristics has also allowed identifying samples based mainly on victims' self-reports which are not officially corroborated. This information is crucial, but focusing exclusively on the victim is insufficient. A completion with other sources is essential as evidence reveals that there are victims with distorted perceptions of victimization (Patró Hernández et al., 2011; Storey and Hart, 2014). Analysis of official data is also required to include lethal cases to contribute to a greater number of risk assessment instruments for IPF and not just for attempted IPF, which are the majority. Regarding the sample, some of the included studies use a recurrent one. These studies used sample data collected for the National Institute of Justice-funded Oklahoma Lethality Assessment Study (OKLA) and Risk Assessment Validation study (RAVE) (Messing et al., 2013, 2015a, 2017, 2020a,b; Messing and Campbell, 2016). This data was used to develop and test different risk assessment instruments for IPF, which poses limitations regarding the obtained solid results, highlighting the need to carry out future studies to validate or refute them using diverse samples.

The findings also respond to the second research question "what are the risk factors for IPF included in the instruments?". The most frequent factors identified in the instruments are validated by several studies that demonstrated an association of them with the IPF. It reveals that they are essential to continue to be part of the instrument to predict the phenomenon. These are escalation of frequency and severity of violence (Nicolaidis et al., 2003; Kivivuori and Lehti, 2012; Vatnar and Bjørkly, 2013; Cunha and Goncalves, 2016; Johnson et al., 2020; Monckton Smith, 2020), sexual abuse (Bagwell-Gray, 2016; Dobash and Dobash, 2016), victim's perception that aggressor is capable of killing her (Nicolaidis et al., 2003; Vatnar and Bjørkly, 2013; Johnson et al., 2020), drug and alcohol problems (Belfrage and Rying, 2004; Kivivuori and Lehti, 2012; Cunha and Goalves, 2016; Dobash and Dobash, 2016; Johnson et al., 2020), battering during pregnancy (Decker et al., 2004), suicide threats or attempts (Belfrage and Rying, 2004), separation (Belfrage and Rying, 2004; Dobash and Dobash, 2011; Cunha and Goncalves, 2016; Abrunhosa et al., 2021), kill threats (Nicolaidis et al., 2003; Belfrage and Rying, 2004; Cunha and Goncalves, 2016), stalking (Nicolaidis et al., 2003; Johnson et al., 2020), aggressor control daily victim's activities (Decker et al., 2004; Dobash and Dobash, 2011; Bagwell-Gray, 2016; Monckton Smith, 2020), aggressor is violently and constantly jealous of victim (Nicolaidis et al., 2003; Dobash and Dobash, 2011; Bagwell-Gray, 2016; Johnson et al., 2020), and access, possession and use of weapons (Cunha and Goncalves, 2016; Reckdenwald et al., 2019; Johnson et al., 2020; Monckton Smith, 2020; Abrunhosa et al., 2021).

There are more factors supported by numerous studies that show their association with IPF, but they are included in a small number of instruments, contrary to the previous case. These are low economic income, unemployment, young women, stepchildren, no children, marital status, history of violence, criminal records, violence with injuries, history of mental health problems, lack of remorse, justifications, minority membership, immigration, non-foreign born aggressor, and non-lethal threats. Concerning the factor of low economic income, several studies reveal that it is an element associated with the IPF. This could explain why other elements already included in the instruments are risk factors as unemployment without economic benefits nor pension (Fernández-Montalvo and Echeburúa, 2005; Cunha and Goncalves, 2016). Furthermore, the evidence specifies that the lack of work by itself also has an impact on IPF perpetration due to being retired or responsible for the household chores are also associated with the deaths that should be considered for inclusion in the instruments (Kivivuori and Lehti, 2012; Sebire, 2017; Ward-Lasher et al., 2018). The factor women age between 15 and 34 years the evidence clarifies the range itself is not relevant, but the fact that the victim is younger than the aggressor (Cunha and Goalves, 2016; Sebire, 2017). Thus, modifying this item to this condition should be considered. The presence of children who are not biological offspring of the aggressor is also corroborated by scientific studies but has not yet been identified. This association with childlessness requires more research and needs to be explored (Sebire, 2017; Soria Verde et al., 2019). Regarding the marital status, it is a factor associated with the IPF. Also, serious partnerships without this status that are living together is another element to be considered for inclusion on the instruments (Dobash and Dobash, 2016). The evidence points at the history of interpersonal violence as a strong predictor of IPF. It could be evidenced in criminal records, and both are integrated into only a few instruments (Kivivuori and Lehti, 2012;

Dobash and Dobash, 2016; Sebire, 2017; Soria Verde et al., 2019; Monckton Smith, 2020).

The use of violence resulting in injuries is a significant risk indicator to IPF when it is on the victim's face, head, or neck, which is not specified in the instruments (Reckdenwald et al., 2019). The factor history of mental health problems could be complete with the evidence, indicating the studies that the presence of any mental disorder in the aggressor is not associated with IPF. Specifically, anxiety, affective, psychotic, and personality disorders are related to it (Belfrage and Rying, 2004; Cunha and Goalves, 2016; Caman et al., 2022). Moreover, the suicide threats or attempts risk factor items commonly included in the tools are a manifestation of the affective disorder and personality disorder such as depressive disorder and borderline personality disorder (Belfrage and Rying, 2004; Caman et al., 2022). The above elements of suicide are related to the victim's danger of death, but also that of the aggressor as evidence indicates that a significant proportion of IPF cases are followed by the suicide of the offender (Vatnar et al., 2022). Simultaneous lack of empathy and remorse are factors associated with IPF (Dobash and Dobash, 2011, 2016). Although not included in the instruments, this evidence suggests the need for consideration in the future. Cognitive justifications to violence by aggressors are an important factor associated with IPF because they neutralize these acts (Fernández-Montalvo and Echeburúa, 2005; Dobash and Dobash, 2011). Immigration is an evidenced factor associated with IPF, and it could be interconnected with the other non-foreign born aggressor factor due to the link to lethal violence is greater when victim and aggressor are immigrants and come from the same ethnic background (Belfrage and Rying, 2004). Acculturation stress, welfare deficiencies and ethnic discrimination could be related to the involvement of immigrants with IPF (Vatnar et al., 2017).Ethnic minority membership is another factor related to immigration validated by scientific studies (Belfrage and Rying, 2004; Fernández-Montalvo and Echeburúa, 2005; Cunha and Goncalves, 2016; Sebire, 2017; Ward-Lasher et al., 2018). Death threats is another factor commonly repeated in the instruments, but it is not for threats against the victim to harm children and report to Child Protective Services, immigration, and other authorities. This is in the face of the victim's desire to denounce the victimization, seeks professional help, or separation/divorce, which are also included in the instruments with low frequency. More research is needed to validate or refute this inclusion to discriminate between lethal and non-lethal violence.

Evidenced factors associated with IPF and not included in the instrument have been identified. Specifically, regarding the aggressor these are protection order and prison sentences (Kivivuori and Lehti, 2012; Dobash and Dobash, 2016; Monckton Smith, 2020), childhood problems (Dobash and Dobash, 2016), distorted beliefs and rigid cognition of aggressor about possessiveness and control over women and fear of abandonment (Nicolaidis et al., 2003; Dobash and Dobash, 2016; Monckton Smith, 2020). Relative to victims there are isolation and submissive behaviors factors (Sebire, 2017; Monckton Smith, 2020). It would be convenient to consider incorporating these factors in the instruments and examining the improvement of psychometric properties with this inclusion. Nevertheless, not only the content and number of factors should be considered, but also the combination of these together to predict IPF. The study of Dawson and Piscitelli (2021) identified that the relationship between the number of factors and the risk of death is not necessarily linear. Different clusters of homicide have been defined and each of them has unique combinations of risk factors. The study of Gnisci and Pace (2016) reveals that IPF is a dynamic process and the sequence in which risk factors appear is important as well as the number and grouping of them. Some elements may be predictive of IPF by themselves, but when combined sequentially with others that occur, their predictive strength may be greater. Therefore, this heterogeneity must be taken into account for the prediction and prevention. Future studies could analyze in representative groups of PPW and IPF a wide variety of factors (related to victim, aggressor, relationship and environment) and consider how the combination of these and their occurrence over time increase or decrease the likelihood of homicide.In other words, not to focus attention on identifying specific factors are risk or protective but whether groups of factors are risk or protective. This would address the diversity and complexity of the phenomenon, leading to new risk assessment instruments and updates of current ones.

The knowledge of factors associated with IPF is essential for inclusion in risk assessment instruments. Their weights need to be pondered since not all have the same influence to predict homicides. Only one study of all included in the review has analyzed risk factor weights which is relative to the DA-I as mentioned in the results (Messing et al., 2013). There are certain studies that, although they do not directly display weights, could be extracted from the Odds Ratio (OR) and Relative Risk Ratio (RRR) scores reported statistically significantly. These are common measures of effect sizes that provide information on the probability that the homicide will occur, given particular factors. Factors with values of 1 indicate no effect on the homicide result, below one decreased risk and above one increased risk for this outcome in this (Schechtman, 2002; Andrade, 2015). The factors considered as low weight are partner control of women's life with OR ranged from 1.73 and 1.90 (Snider et al., 2009; López-Ossorio et al., 2021) and suicide ideas and attempts with RRR of 0.90 (Messing et al., 2020b) and OR of 1.994 (López-Ossorio et al., 2021). The last one could reduce the risk of IPF by a score lower than 1, being necessary to analyze it in future studies. There are two factors considered as medium weight, which is woman believe that man is capable of killing her by OR scores between 2.5 (Messing et al., 2017) and 5 (Snider et al., 2009) and battering during pregnancy by OR between 2.1 (Messing et al., 2017) and 3.4 (Snider et al., 2009). No high weight factors have been identified as there are controversies. In particular, escalation of violence has low weigh by an OR of 1.9 (Messing et al., 2017) but also high weight by an OR of 4.7 (Snider et al., 2009), violent and jealousy partner has a low weight by an OR ranged between 1.9 and 2.1 (Messing et al., 2017; López-Ossorio et al., 2021) and high weight by an OR of 5.5 (Snider et al., 2009), and strangulation has low weights by OR of 1.74 (Messing and Campbell, 2016) and 2.6 (Messing et al., 2017) and high weights by OR 4.1 (Snider et al., 2009). In this regard, it would be

convenient to carry out studies on the weights of the mentioned factors and on those where this is not yet known. Moreover, it is crucial to also know the factors with RRR or OR scores lower than 1 to obtain information on elements that dampen the risk factors know up to know. This could improve homicide risk management by providing greater protection to cases with many risk factors and few protective factors.

The results also respond to the third research question, "what are the reliability and validity of the instruments?." Some studies reported reliability, indicating that the instruments are 70% reliable and, consequently, 30% unreliable based on the consistency of the items for the outcome measured. This affirmation is extracted by a mean Cronbach's α score of 0.70 that is close to 1 (Campbell, 1986; Brown, 2002; Wang, 2015; Messing and Campbell, 2016; Messing et al., 2020b). The interrater reliability is only reported in one study, and it indicates good consistency of the instrument based on the degree of agreement on the items by an intraclass correlation coefficient of 0.83, which is close to 1 (Storey and Hart, 2014; Koo and Li, 2016). There is also one study that examined the construct validity, which indicates medium agreement with other similar measures due to a moderate positive correlation of 0.50 (Campbell, 1986; Adams et al., 2014; Chiu et al., 2015). The mentioned psychometric properties are not commonly revealed in studies included in the review, and future research should focus on these elements. The predictive validity is an exception due to these specific forms of criterion validity reported in most studies.

The balanced sensitivity and specificity scores of the instruments presented in the results do not always correspond to the prediction of IPF or attempted IPF but to specific cut-off scores and levels of danger. For instance, the updated version of the DA (Campbell et al., 2009; Storey and Hart, 2014) has a sensitivity of 0.55 and specificity of 0.97 for the extreme danger, while the balance is at the severe level with a sensitivity of 0.79 and specificity of 0.86. The consideration of extreme level is essential for predicting IPF or attempted IPF since it is closer to lethal outcome measured, although unbalanced. The same is applicable to the updated version of the DA-I (Messing et al., 2020b) which has a sensitivity of 0.29 and specificity of 0.969 for extreme levels compared to a sensitivity of 0.86 and specificity of 0.63 for severe levels. This data indicates underprediction contrary to the overprediction of the lethality screen (Messing et al., 2015a; Messing and Campbell, 2016) which has a high sensitivity of 0.93 and low specificity of 0.21. What is more, the DA-LE (Messing and Campbell, 2016; Messing et al., 2020b) has a balanced sensitivity of 0.60 and specificity of 0.70 approximately at the cut-off point of 7 over 11. It indicates low risk under that score and high risk above it, but as the cut-off increases, the sensitivity decreases and specificity increases significantly. For example, at a cut-off score of 9, the sensitivity is 0.24 and specificity is 0.90, and at 11, sensitivity is 0.04, and specificity is 0.98. The same is observed for the DA-5 (Snider et al., 2009), the updated version of the DA-5 (Messing et al., 2017), and the SIVIPAS (Echeburúa et al., 2009). These instruments could also lead to an underprediction of high-risk cases. In this regard, studies that assessed the PVW cases and then followed up on them to see whether the lethal or non-lethal result occurred report tool overprediction problems, whereas studies that analyzed know lethal and non-lethal PVW display underprediction problems (Campbell et al., 2009; Storey and Hart, 2014). It is necessary for future research to apply both types of studies to each of the instruments for IPF for stronger results.

The equilibrium of the mentioned elements is essential to discriminate high-risk cases from those that are not preventing a high number of false positives and false negatives. The first case makes it difficult to assist victims at risk because of the confusion generated by non-high-risk cases and the existence of limited resources, and the second case generates problems in the detection of high-risk cases and, therefore, in their prevention. The recently updated version of the DA (Messing et al., 2020a) overcomes this unbalanced limitation of the updated version of the DA (Campbell et al., 2009; Storey and Hart, 2014) due to an acceptable equilibrium in sensitivity and specificity for the extreme danger level. However, these measures should be tested again for the other mentioned studies.

In this section limitations of the included studies and future lines of research to address them have been presented. The process of systematic review also has several limitations that must be contemplated. First, it is possible to have additional studies related to risk assessment instruments for IPF, beyond those analyzed in the review. They have not been included because they are not in the databases used or didn't meet inclusion criteria such as not being in English or not being scientific articles. Second, the synthesis of the information from the studies has been carried out as neutrally and objectively possible, but there is the possibility that the interpretation of some results may not correspond with the original authors initially intended to transmit. The systematic review has also strengths. First, the systematic review has performed under the quality standards. The PRISMA guidelines (Page et al., 2021) was used allowing the course of the rigorous review process. Additionally, a quality assessment of the search strategy was conducted using an innovative text mining methodology LSA, and a quality assessment of the included studies through an adaptation of CASP, EPHPP, and CRD tools (Geraghty and Woodhams, 2015). Second, the review not only evidence the specific instruments for IPF but also detects their weaknesses and proposes future research to address them.

Practical Implications

The outcomes of this paper provide to first responders with specific evidenced-based knowledge on a wide range of risk assessment instruments for IPF and their psychometric properties. Furthermore, cultural and contextual adaptations as well as recent updates of the instruments are also reported. As a result, this research contributes to (1) simplify the choice of the appropriate instrument for professionals and (2) enhance the accuracy of prediction, since updated figures on reliability and validity are given. Last but not least, this knowledge facilitates the management of high-risk cases detected through interventions for preventing IPF.

5. CONCLUSION

The systematic review provides an overview of evidence-based risk assessment instruments for IPF, which are the

Danger Assessment, the Danger Assessment for Immigrants, the Danger Assessment for Law Enforcement, the Danger Assessment-5, the Taiwan Intimate Partner Violence Danger Assessment, the Severe Intimate Partner Risk Prediction Scale, The Lethality Screen, and the H-Scale. Content of risk factors items of IPF, validity, and reliability of these instruments are synthesized. Information on country, year, sample, and data sources in which the studies that support these instruments were conducted is also summarized. This comprehensible knowledge could assist professionals involved in PVW use tools within an evidence-practice framework to identify women victims at risk of near-lethal or lethal violence by their partners and respond with risk mitigation strategies at a time to prevent it. In addition, this review highlights research gaps to be considered in future studies on this field.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

AUTHOR CONTRIBUTIONS

EG-V, NA, FF-N, and DB-A have designed the systematic study. They have involved to determine the aims, the method and results configuration. EG-V and NA have searched for studies on databases and collaborated for the peer review. EG-V has drafted the manuscript and prepared the figures and tables with the NA, FF-N, and DB-A assistance. NA, FF-N, and DB-A have been responsible for supervising the paper. All authors contributed to results interpretation and critical discussion.

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BRIEF RESEARCH REPORT
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Describing Patterns of Known Domestic Abuse Among Different Ethnic Groups

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Domestic abuse perpetration remains a major threat to public health, safety and wellbeing, causing serious harms and contributing significantly to overall crime globally. In the United Kingdom, research links the crime type to high economic and social costs. In the last 10 years, our collective knowledge of domestic abuse has grown in conjunction with its prioritisation in government policy. Several innovative studies have built a picture of the most serious cases and overall patterns of abuse but to date, examination of these trends by ethnic groups has been limited despite increasing attention to disproportionality in racially minoritised communities in criminal justice system outcomes. In this article we aimed to address this issue through the analysis of 150,000 domestic abuse records kept by police forces in England. Using descriptive statistics, we examined the relative distributions of different ethnicities by suspected offending rate, investigative outcome and crime harm. We found two patterns of note: firstly, that suspects from several categories of minoritized communities are consistently over-represented compared to the White British population among most harmful cases, and secondly, that in Asian communities, offences are less frequently "solved." We discuss the implications for future research and practice.

Keywords: domestic abuse, domestic violence, intimate partner abuse, disproportionality, crime harm, racially minoritized communities

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INTRODUCTION

Domestic abuse perpetration is a major threat to public health, safety and wellbeing in the 21st century. It causes serious harms and contributes significantly to overall crime. The recently legislated definition of this crime includes physical, sexual, violent, controlling, economic and psychological forms of abuse (UK Government, 2021) Office for National Statistics (ONS) data for the year ending March 2020 states that an estimated 5.5% of adults aged 16–74 were subjected to domestic abuse in the previous 12 months, and 357 domestic homicides were recorded by police between March 2017 and March 2019 (Office for National Statistics [ONS], 2020). Meanwhile, over

one-third (35%) of all violence against the person offences, and around 16% of sexual offences–recorded by England and Wales police in the year ending March 2020–were flagged as domestic abuse related (*ibid*).

Domestic abuse has emerged as a significant policing priority over the past decade, particularly following scrutiny by the national police oversight body (Her Majesty's Inspectorate of Constabulary, Fire and Rescue Services [HMICFRS], 2014) regarding failings in the police response to victims. However, given reduced police capacity in the wake of significant budget cuts, and rising demand for interventions, police forces are under pressure to ensure that finite resources are being directed in the most effective and targetted way possible.

Recent research on the estimated economic and social costs of domestic abuse found that, for the year ending 31 March 2017, the overall cost of domestic abuse amounted to £66 billion (Oliver et al., 2019). This sum includes an estimated £47 billion associated with the considerable emotional and physical harms sustained by victims, as well as costs to the economy linked to reduced economic productivity and output (£14 billion), and costs for health service (£2.3 billion) and police (£1.3 billion) (Oliver et al., 2019). The magnitude of individual, social and economic harms incurred because of domestic abuse underlines the need to tackle the root of the problem, identifying and working with those perpetrators likely to cause the most harm.

When responding to domestic abuse among racially minoritised communities, it is crucial to account for historical and social context, and how this may affect confidence and trust in the police and criminal justice system and willingness to report domestic abuse. Black, Asian and other racially minoritised people continue to be over-represented in the criminal justice system in England and Wales, and to experience disparate outcomes. For example, the Lammy (2017) Review found that, while making up only 14% of the population, Black, Asian and other racially minoritised individuals made up 25% of prisoners, and more than 40% of young people in custody. This disproportionality extends to pronounced differences in sentencing for some crimes; for example, for drugs offences, other racially minoritised individuals were 240% more likely to receive a prison sentence than White offenders (Lammy, 2017).

Concerningly, the Crown Prosecution Service has also identified significant discrepancies in the prosecution and conviction rates for domestic abuse, with a higher prosecution rate for Black, Chinese and "Other" defendants (Lammy, 2017). This disparity indicates that other racially minoritised defendants are disproportionately likely to face imprisonment, and perhaps accordingly may be less likely to have the opportunity to access evidence-based and rehabilitative community interventions such as Respect-accredited perpetrator programmes.

These differences in treatment throughout the criminal justice system impact not only offenders but all those racially minoritised individuals disproportionately affected by policing practices such as Stop and Search, or through the increased arrest rate for Black and Mixed ethnic background people (Lammy, 2017). The pervasive "racialisation" of crime by the media, and the perception that criminal justice system structures and procedures selectively "target and criminalise" Black, Asian and other racially minoritised people (Fekete, 2018, p. 77), could diminish confidence in police among racially minoritised people experiencing domestic abuse, and may make it less likely that these victims will trust police to intervene and deliver just outcomes (see Adisa and Allen, 2020).

The racial disparities which exist at each stage of the criminal justice system have implications not only for the offender but for the wider community, resulting in a "trust deficit" that reduces police's ability to safeguard survivors, disrupt perpetration and hold those using harmful behaviours to account (Lammy, 2017: 29).

When designing, commissioning and evaluating interventions for racially minoritised individuals using harmful behaviours, the legacies of this ingrained inequity must be considered. For instance, professionals from Black, Asian and other racially minoritised communities note that the use of the term "perpetrator" may be experienced as alienating and associated with racialised stereotypes about criminality, deterring people from seeking help to change their harmful behaviours (see Govier and Verwoerd, 2004 for a discussion on aspects of how labelling language can cause false dichotomies). Additionally, culturally specific interventions are lacking in the current landscape of perpetrator interventions which limit our understanding of "What works" and "for whom" within Black, Asian and racially minoritised communities (Adisa and Allen, 2020).

Currently, tailored provision for Black, Asian and other racially minoritised people seeking to end their use of harmful behaviours remains sparse; a recent rapid review of non-mandated interventions for those using abusive behaviours in intimate relationships did not include any culturally specific or specialised programmes for Black, Asian or racially minoritised people (Callaghan et al., 2020).

The Current Study

This research aims to use domestic abuse crime data to assess the relationships and patterns between levels of harm and potential predictor variables. This is a descriptive study which aims to set a foundation for future analysis. Its findings may aid future policy decisions before they influence future research, including the refinement of prevention and risk assessment procedures.

This research is exploratory in nature, dealing with a cross-sectional dataset. As this study was part of a broader framework of research, our research questions did not venture beyond the descriptive–seeking to establish a "baseline" profile of the issue of harm and its distribution across ethnicities. It sought to address the following questions in particular:

- RQ1–What is the profile of domestic abuse suspects by ethnicity?
- RQ2–What is the profile of crime harm, overall and by ethnicity?
- RQ3–What is the profile of risk assessment by ethnicity?
- RQ4–What is the profile of investigative outcome by ethnicity?

- RQ5–What is the contribution of different ethnicities to the "power few" most harmful suspects?

MATERIALS AND METHODS

Participants

Datasets were supplied from three English police forces, anonymised in this article as Forces A, B, and C. A data specification and follow up meeting was provided to each force through the data collection process, ensuring some consistency of format in the datasets received. Although data recording for crimes–and domestic abuse in particular–is subject to national guidelines, at an individual record level there are numerous discrepancies to manage when aggregating data of this nature such as differences in code lists.

Materials

The consistent variables we were able to secure comprised of: (1) Offence ID number, (2) earliest date upon which the crime took place, (3) Home Office Counting Rule code[1], (4) Crime Classification description, (5) Investigation outcome, (6) Suspect ID number (where applicable), (7) suspect age, (8) suspect ethnicity as defined by themselves (known as self-defined ethnicity), (9) suspect ethnicity as defined by the recording officer, (10) suspect sex and various indicators of suspect's prior criminal history for domestic and non-domestic crimes.

Procedure

Each participating police force was supplied with a data template which was explained at virtual meetings with the research team. Each dataset was supplied in Microsoft Excel format and subsequently synthesised into an amalgamated dataset of consistent variables. One calculated variable was added to the dataset for the measurement of harm. This variable took the Home Office Crime Recording classification as its source and used the Cambridge Crime Harm Index (CCHI) (Sherman et al., 2016) as its reference. The CCHI weights crime classifications by days, with days relating to sentencing guidelines. Each weight refers to the minimum sentence a court may issue: for example, a robbery has a minimum sentence of 1 year in prison so the weight is 365 (days). As its authors have argued (and is subsequently discussed in Sherman (2020), the CCHI offers a way of comparing crime patterns taking into account that each crime is different. The harm captured by CCHI is against the state and is formulated in a consistent and democratic framework. The CCHI has been used by multiple published studies of domestic abuse [see (Bland and Ariel, 2015); 2020 for examples]. Bland and Ariel (2020) sets out the case for CCHI being current "superior" method for measuring harm for English or Welsh crime datasets.

Data Analysis

The majority of analysis were undertaken in Microsoft Excel 2019 using pivot tables to generate descriptive statistics. We use *z*-tests to compare the proportional distribution of ethnicities, which were calculated with the online calculator available from Social Science Statistics[2], which includes z-statistics and accompanying *p*-values.

[1]The UK Home Office regulates the crimes recorded by police forces under one catalog of codes and definitions, known as the Home Office Counting Rules.

RESULTS

RQ1–What Is the Proportion of Domestic Abuse Crimes by Ethnicity?

A moderate proportion of self-defined ethnicity data are unrecorded, either due to the suspect being unidentified, refusing to answer the question or the police failing to record the answer. Force A reported 28% of cases with no self-defined ethnicity by the suspect. In Force B, this proportion was 10% and in Force C it was 51%.

For the purposes of this profiling, these records were excluded but clearly the true answers may skew our findings, even in the most optimistic case. We are unable to decipher if the gaps in recording are systematic or random and so we urge a note of caution in the interpretation of these findings.

Figure 1 shows that there is no distinct or obvious pattern of higher repeat offending rates in Black/Caribbean/African suspects compared with White British suspects. These analyses are based on our overall crime dataset, so repeat offenders of the same recorded ethnicity may skew results. We explored the extent of repeat offending on the offender subset, therefore controlling for high volumes of repeat offenders.

RQ2–What Is the Profile of Crime Harm, Overall and by Ethnicity?

Typically, analyses that utilise the CCHI are not normally distributed (see Bland and Ariel, 2015, 2020; Barnham et al., 2017; Kerr et al., 2017). This is also the case with our dataset, which represents something approximating a Pareto distribution[3]. As **Figure 2** shows, most suspects across the three datasets accumulated CCHI totals equivalent to less than six months in prison. There is not a universal Pareto distribution however–note the peak around 1825 days (5 years) which is linked to the minimum sentence for grievous bodily harm offences.

This distribution mirrors that seen in previous studies in this area (see Bland and Ariel, 2015, 2020; Barnham et al., 2017). In simplistic terms, a small proportion of suspects are associated with a greater proportion of harm. In these three datasets combined this trend is that 5% of suspects account for 65% overall harm. This issue is explored in more detail in RQ5.

The measure of central tendency in the data is affected by this distribution, which includes some extreme outliers. The mean number of CCHI days is 177 (SD = 538). The median is a more accurate reflection of the centre of the dataset at 10 days. The central point holds true across different ethnicity bandings within the force jurisdictions The exception was notably Force A, where

[2]https://www.socscistatistics.com/tests/ztest/

[3]The Pareto distribution typically refers to an 80–20 rule–the distribution of 80% of an outcome among 20% of units. It is named for the Italian sociologist and economist, Vilfredo Pareto.

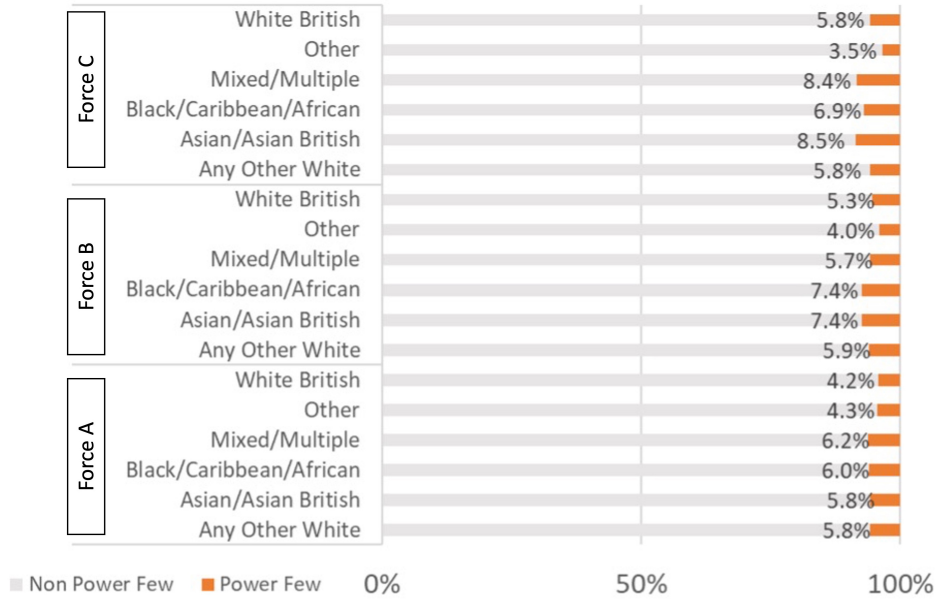

FIGURE 1 | Comparison of repeat suspect rates across ethnicity bands.

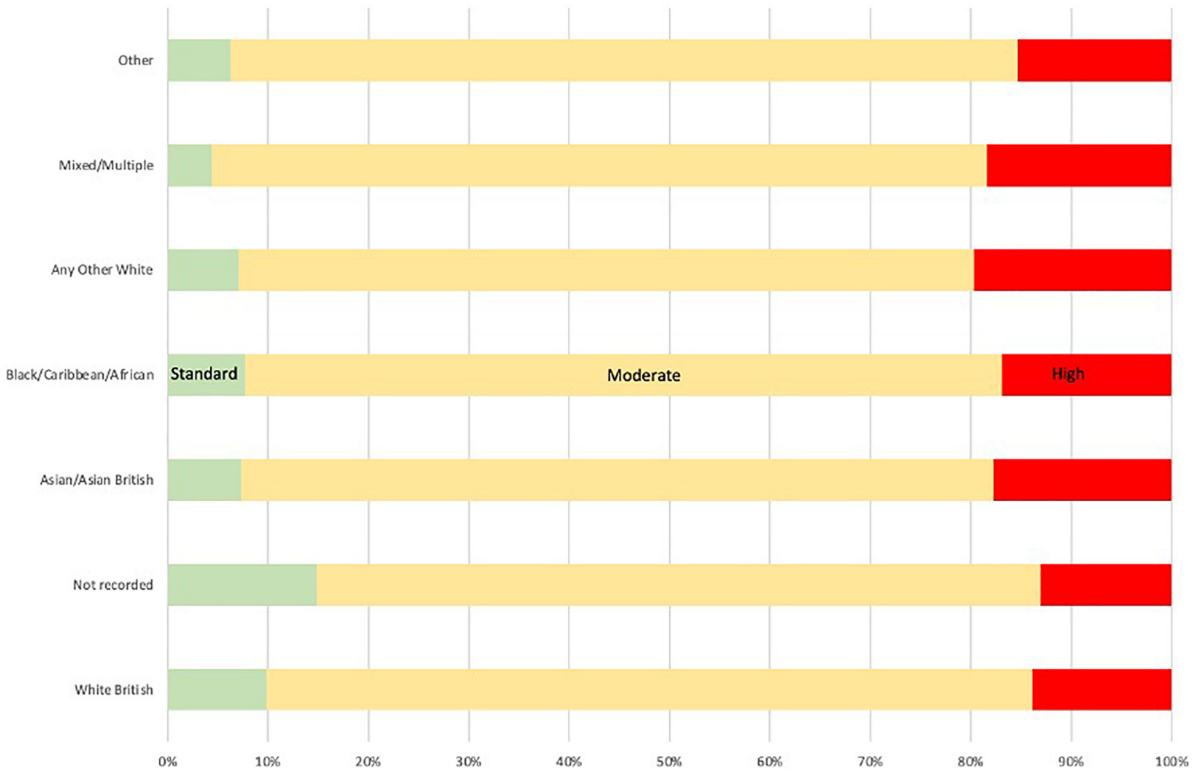

FIGURE 2 | Distribution of CCHI totals among suspects.

median CCHI totals were approximately half of those in Force B and Force C for every ethnicity banding. In practical terms, we might infer that the "typical" cumulative harm of domestic abuse offenders does not rise above the level of an actual bodily harm–a violent crime which is to the detriment of the victim without causing serious physical injury by itself.

RQ3–What Is the Profile of Risk Assessment by Ethnicity?

Force A was the only force to supply us with risk assessment gradings. In total, 74% of these were at the "moderate" risk level, 15% at the "high" risk level and the remaining 10% at "standard" risk. Almost a third of these records had no recorded suspect ethnicity, so we emphasise caution in the findings and note that among these "blank ethnicity" cases, 15% were "standard" risk. **Figure 3** shows the full breakdown.

It is difficult to draw meaningful conclusions from these data based on the descriptive analysis alone. They relate to just one force, and the smallest dataset among those we received. They do not indicate any stark disproportionate differences in gradings between differing ethnicity groups but there are differences. 13.8% of white British cases are identified as "high risk." Proportionally, all other bandings have higher rates of "high risk" grading, with "any other white" the most different at almost 1.5 times the rate.

RQ4–What Is the Profile of Investigative Outcome by Ethnicity?

All domestic abuse crimes reported to the police are investigated and assigned an "outcome code" based on the results of that investigation. Broadly, the 22 available codes are divided into two categories which might be described as "solved" and "unsolved." Solved cases include charging the suspect to court, issuing a caution or community resolution. Unsolved codes are divided into differing reasons for that outcome, such as a different organisation being passed the case or the victim being unwilling to support a prosecution. Police forces are commonly assessed on their "solved rates," the proportion of crimes which they obtain a positive outcome for, as an indicator of their performance.

In Force A, the "solved rate" for cases involving "White British" suspects was 13.4%, compared to 16.4% in Force B and 18.9% in Force C. There was little variation between these rates and those of minoritized communities. "Black/Caribbean/African" suspect cases were "solved" in 13.3, 16.2, and 18% of the time in Forces A–C, respectively. One pattern that was repeated was that cases involving "Asian/Asian British" suspects are solved at between 0.79 and 0.86 times the rate of "White British" cases. Indeed, the solved rate for cases with "Asian/Asian British" suspects is nearly always lower than all other bandings.

RQ5–What Is the Contribution of Different Ethnicities to the "Power Few" Most Harmful Suspects?

In RQ2, we identified that the distribution of harm in our datasets broadly mirrors a Pareto distribution mirroring previous work on domestic abuse harm. Specifically, we highlighted that 5% of suspects correlate with 65% of harm. This is consistent with the concept of "the power few" (Sherman, 2007)–the few offenders who offer the most powerful opportunities for harm reduction.

When dividing the aggregated data into three datasets, the "power" of the power few in each force is slightly different. In Force A, 544 suspects equate to the top 5% most harmful suspects. Together, these 544 represent 78% of cumulative harm in Force A. In Force B, the 5% most harmful suspects is made up of 1,413 individuals who collectively account for 54% of total CCHI days. In Force C, the total is 2,601 suspects who represent 59% of harm.

In Force B and Force C, a total score of 1,825 CCHI days (equivalent to a grievous bodily harm offence) would mean a suspect is included in the "power few." In Force A, the distribution of harm is more acute. A score of 400 days or above would place a suspect in the top 5%. Nevertheless, we have treated each force as distinct to reflect the patterns within each jurisdiction's most harmful suspects.

These analyses show that "Asian/Asian British," "Black/Caribbean/African" and "Mixed/Multiple" bandings are consistently over-represented in the most harmful group of suspects than we might expect if all things were equal. The baseline distribution of the "power few" is that just 5% of suspects are within this category. So, our starting hypothesis is that each ethnicity banding will reflect this equally. **Figure 4** shows the proportion of each ethnicity banding that are within the "power few."

Proportions as small as these can be difficult to interpret visually. We might notice that "Asian/Asian British" proportions are higher in two forces but how much stock to place in this difference is harder to determine without inferential statistics. We undertook *z*-tests for two population proportions to test the hypothesis that these proportions were different from each other in a generalisable sense. From these we may conclude that we may accept that there are real differences between the proportions of "White British" and all three of "Asian/Asian British," "Black/Caribbean/African" and "Mixed/Multiple" suspects in the power few. These differences are universally consistent with a higher proportion of suspects in the latter three categories.

DISCUSSION

This study is the latest in a series of analyses of domestic abuse crime data (see Bland and Ariel, 2015, 2020; Barnham et al., 2017; Kerr et al., 2017; Turner et al., 2019; Weir, 2019) but the first to explore the distribution of harm among ethnicities. Like all crime data studies, the data source is flawed. Domestic abuse is underreported in crime data (Office for National Statistics [ONS], 2019) and it if patterns in the United Kingdom replicate those found in the United States (Holliday et al., 2020) then it is likely that the underreporting is even more pronounced in ethnicity-based analyses like this one. To compound this issue, our research suggests a problem with the recording of self-defined ethnicity in police data. For half the domestic abuse suspect records in a large police organisation to be missing any self-defined ethnicity information is a substantial gap that policymakers need to attend to.

Notwithstanding these issues, our study presents the scholarly attempt to dissect patterns by ethnicity in reported domestic abuse. It shows general homogeneity in trends across ethnicities in respect of repeat suspect rates, median harm and risk assessments. Two differences in ethnicity profile pique our interest. The first is that "Asian/Asian British" suspects are

FIGURE 3 | Proportions of risk assessment score by ethnicity banding.

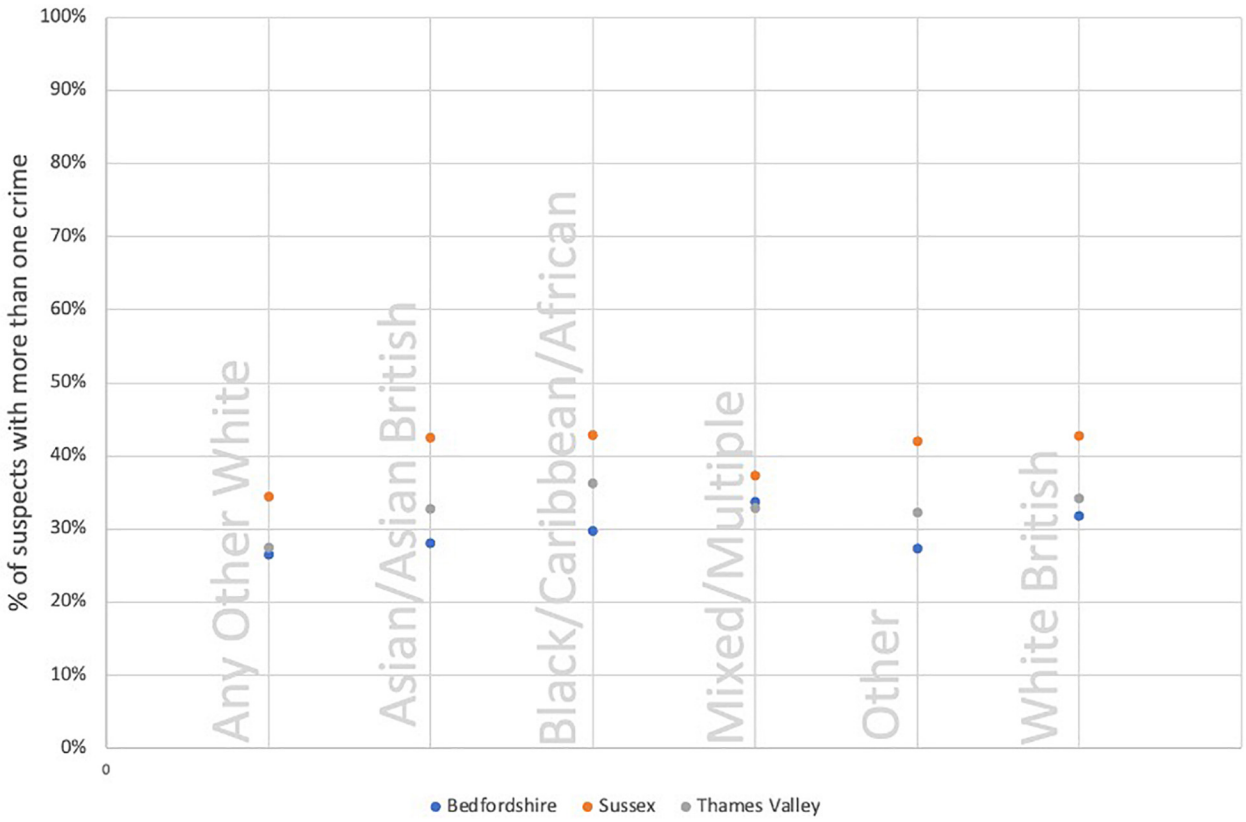

FIGURE 4 | Proportion of suspects within the power few, by ethnicity banding.

consistently among the lowest for proportion of cases solved. We must be cautious–we have only analysed three of the 43 forces in England and Wales, but it is notable that this ethnicity is in the lowest two in each of the three we have examined. The second is that "Asian/Asian British," "Black/Caribbean/African" and "Mixed/Multiple" ethnicities all feature more frequently

in the "power few" group of most harmful offenders more than "White British" suspects. "White British" suspects make up the largest proportion of victims and suspects of domestic abuse by virtue of the fact that this category is the largest ethnicity classification in the United Kingdom (80.5% of the United Kingdom population recorded in the 2011 census was White British) and the results of the Crime Survey of England and Wales (Office for National Statistics [ONS], 2021). The ONS survey reports on victims, not suspects so we cannot draw precise comparisons here, as our research discusses suspects. But the fact that we have identified statistically significant differences in the expected proportions of suspects in "Asian/Asian British" and "Black/Caribbean/African" compared to "White British" in each of the three police jurisdictions we studied is notable and worthy of further exploration. If domestic abuse dyads are predominantly ethnically homogenous (and this has not been rigorously established), and if underreporting is greater in minority ethnic communities, then why are minority ethnic suspects more frequently making up the most harmful cohort of offenders? One explanation may be that these cohorts are, by definition, more visible to police. Serious physical crimes (such as grievous bodily harm and homicide), leave more evident traces and so underreporting becomes less of a factor. But this is merely a hypothesis.

Our findings are based on data with limitations. Police administrative records do not represent all domestic abuse that happens in society. The differing rates of ethnicity recording is also problematic for the drawing of robust inferences but we can still state that more research is urgently needed to investigate the disparity in ethnicity composition of the most harmful suspects. The same research should be undertaken for victims of domestic abuse. All 43 police agencies in England and Wales record information on these individuals, so such research is far from infeasible. Indeed, it is essential if we are to confront important questions for policymaking. A more widespread analytic review of data gaps is the first logical step to developing our understanding, but it is also likely that researchers will need to consult wider datasets than just police recorded crime. Community surveys such as the Crime Survey of England and Wales (see Ariel and Bland, 2019 for a comparison of this measure and police records).

When it comes to domestic abuse responses, it appears that ethnicity is an important variable. Simply adopting a "colour blind" or "one size fits all" approach means that racially minoritised people's specific needs and sensitivities too often go unrecognised and unfulfilled. To ensure equal protection from harm, and equal access to justice, it is incumbent on those designing, commissioning and evaluating programmes to explicitly consider the needs of different groups and make sure that these are embedded at each stage of programme development.

DATA AVAILABILITY STATEMENT

The data analysed in this study is subject to the following licences/restrictions: Data are subject to General Data Protection Regulation provisions as outlined in individual Information Sharing Agreements with the data providers. Requests to access these datasets should be directed to OA, o.adisa@uos.ac.uk.

ETHICS STATEMENT

The research was conducted having been augmented by the University of Suffolk's Research Ethics Committee. Research undertaken at the University of Suffolk complies with the UK Research Integrity Office (UKRIO) Code of Practice for Research (2021).

AUTHOR CONTRIBUTIONS

MB conducted all data analyses and was the architect of this manuscript. MB, RW, and OA collaborated on the design of this research following an original idea by OA. OA secured the funding and was responsible for overall administration of the project until her maternity leave (congratulations!) when DM took over. KA and JF undertook research of literature and contributed to the drafting of this manuscript. All authors contributed to the article and approved the submitted version.

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ORIGINAL RESEARCH
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Opportunity-Reduction Supervision Strategies With Domestic and Family Violence Probationers and Parolees

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Many forms of supervision strategies traditionally utilized by probation and parole officers emphasize service brokerage, case management, and compliance. Conversely, there is a growing evidence-base that demonstrates how community corrections practices can be (and have been) improved through supervision frameworks of behavior change oriented around criminogenic needs. Toward this end, recent advances in penology have applied the tenets of environmental criminology theories to community corrections practices, seeking to identify and modify each individual's opportunity-based risks for reoffending. In this article, using data from an Australian experimental trial, we explore the utility of an "Environmental Corrections" approach to the supervision of domestic and family violence perpetrators serving probation and parole orders, an offending cohort with growing political and public pressures. Quantitative analyzes indicate that this opportunity-reduction supervision framework was effective in reducing recidivism among all offenders. Amongst probationers and parolees on community corrections orders for domestic and family violence offenses only, rates of reoffending were 15.41% lower for offenders at the treatment site compared to the control site, although this difference was not statistically significant. A thematic analysis of semi-structured interviews with these clients highlights that through the Environmental Corrections trial, they learned strategies for identifying, avoiding, and resisting opportunities to reoffend. Combined, this evidence suggests that opportunity-reduction supervision tactics may hold promise for limiting recidivism amongst domestic and family violence perpetrators, although further research is required.

Keywords: domestic and family violence, probation and parole, community corrections, crime opportunities, opportunity reduction, environmental criminology, Environmental Corrections

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INTRODUCTION

Given the substantial number of people affected by the corrections system, we must question whether agencies, communities, and clients are benefiting from this arrangement as expected (Cullen et al., 2017). The massive growth in the world's prison populations has had enormous consequences for community corrections; more people are placed on community-based orders as a diversion from incarceration and more people are supervised on parole following their discharge from custody (Phelps, 2013; Schaefer and Brewer, 2022). Given the growth in the number of individuals under correctional control, reoffending is a significant concern for the criminal justice system and communities alike. For instance, 62% of released prisoners in the US were arrested within 3 years of release (Durose and Antenangeli, 2021), 29% of released prisoners in England

and Wales were reconvicted within 1 year (Ministry of Justice, 2020), and in Australia roughly half of released prisoners return to custody within 2 years (Australian Government Productivity Commission, 2021). Rates of reoffending have remained a stubborn penological problem in many jurisdictions around the world, despite substantial growth in the evidence-base of how to effectively supervise and rehabilitate correctional clients (Cullen et al., 2017).

Parallel to this problem has been the heightened political and policy attention paid to domestic and family violence (DFV), facilitated by movements such as "Me, too" and "March 4 Justice" (social justice initiatives that aim to highlight the unacceptably high rates of sexual, physical, emotional, and financial abuse against females).[1] Official figures detail the startling prevalence of these offenses. Estimates by the World Health Organization [WHO] (2021), for example, indicate that globally, roughly one in three women (30%) have been the victim of physical or sexual violence at least once in their life since the age of 15. These figures are mirrored in Australia, where two in five adults (39%) reported an incident of physical or sexual violence since the age of 15 (Australian Bureau of Statistics, 2017); one in six women reported experiencing physical or sexual violence by a cohabitating partner since the age of 15 (Australian Institute of Health and Welfare, 2018), and there is evidence that rates of male DFV victimization are increasing (Gleeson, 2020). Although experts acknowledge that the true extent of DFV is unknown (Mouzos and Makkai, 2004) and violence can be bidirectional, data reveal that these offenses are highly gendered, disproportionately affecting women (along with children and other vulnerable groups, such as the elderly and disabled; Australian Institute of Health and Welfare, 2019).

Combined, these social problems produce enormous implications for victims and families but also for public health and community safety more broadly. For instance, a study in New South Wales identified that roughly one-fifth (19.7%) of final Apprehended Domestic Violence Orders (ADVOs, which are court orders made to protect threatened individuals from violence or threats of harassment from a spouse, *de facto* partner, ex-partner, family member, carer, or a member of the household) were breached (Poynton et al., 2016). Further investigation of the characteristics of ADVO breaches reveals that a significant portion of these individuals receives community supervision (15.7%) or custodial correctional (12.4%) penalties (Trimboli, 2015). Figures further highlight the recidivistic and dangerous nature of these offenses; of the persons who appeared in New South Wales courts in 2013 that involved a proven ADVO offense, more than half (53.3%) had at least one prior proven violence offense (namely assault and stalking), and more than one-quarter (28.7%) had previously breached an ADVO (Trimboli, 2015). In the Australian state of Queensland, more than 30,000 DVOs were breached in 2019, an increase from around 19,000 breaches just 5 years prior (Cartwright, 2021), and almost five times the number since 2001 (Lynch, 2020).[2] These issues have likely been exacerbated by COVID-19, with victim surveys revealing that the pandemic has coincided with the onset or escalation of DFV (Boxall et al., 2020; Gleeson, 2020), and practitioners and policymakers referring to the increased violence against women as a "shadow pandemic" (Carrington et al., 2021).

Accordingly, responding to DFV has become a national priority in Australia, evidenced in legislative and policy frameworks such as the *National Plan to Reduce Violence against Women and their Children 2010–2022* (Council of Australian Governments, 2011).[3] One of the realities of this landscape that government sectors must grapple with is how to manage these offenses. Apart from prevention and public education strategies, the criminal justice system is tasked with apprehending perpetrators and allocating and administering punishments, with corrections agencies responsible for the custodial and community supervision of clients who have DFV as their index offense or have a related order [e.g., a probationer serving a community sentence for drugs simultaneously having a Domestic Violence Order (DVO) against them]. The public scrutiny and political pressures of managing DFV offenders have likely created additional strains on an already overwhelmed system. As such, we must question the effectiveness of our approaches to offender management (Cullen et al., 2017; Schaefer and Brewer, 2022), including specific investigations of how best to meet the challenges presented by DFV perpetrators under community supervision (Crowe et al., 2009; Spencer et al., 2020). In this article, we pursue this objective. Using data from an experimental trial of a new model of probation and parole, we utilize a mixed-methods approach to explore whether an opportunity-reduction supervision framework has utility for DFV perpetrators serving community corrections orders.

LITERATURE REVIEW

Although there are effective community corrections practices and an amalgamation of empirical support is building evidence-based practices in probation and parole (e.g., MacKenzie, 2006; Bonta et al., 2008; Andrews and Bonta, 2010; Trotter, 2013; Chadwick et al., 2015), these strategies and activities are not routinely utilized and widespread success is rarely observed (Schaefer et al., 2016; Schaefer and Brewer, 2022). As described by Cullen, Jonson, and Mears, their recommendation that community corrections be reinvented entirely around an evidence-base is "pregnant with the dismal truth that most supervision is guided by something else. . .[such as] practices rooted in misguided personal insights and bureaucratic convenience" (2017, p. 55). This apparent failure to use the empirical evidence of "what works" to guide offender supervision may be due to any number of issues (e.g., poor program fidelity, staff burnout and stress, no usable tools for converting evidence to practices, the absence

[1] https://www.march4justice.org.au/

[2] Unfortunately, these figures do not consider the population size of the state. Estimates by the Australian Bureau of Statistics indicate that the population of Queensland was 3.67 million in 2001 compared to 5.22 million in 2021, suggesting that the underlying *rate* of breaches has grown in ways that outpace population growth.

[3] While the current *National Plan* is set to expire in mid-2022, a renewed policy framework (for 2022–2032) has been drafted.

of a guiding framework for orienting the actions of frontline staff; Latessa et al., 2002; Gleicher et al., 2013; Schaefer et al., 2016; Schaefer and Williamson, 2017; Schaefer and Brewer, 2022). Whatever the reason, the current state of probation and parole practices produces logical questions about whether an ideological transformation in community corrections is required.

There is a growing evidence-base of effective practices in probation and parole, with individual and meta-analytic studies highlighting useful supervision- and intervention-focused applications that have helped to improve processes and outcomes alike (MacKenzie, 2006; Andrews and Bonta, 2010; Chadwick et al., 2015). These advances notwithstanding, some scholars have argued that from the "nothing works" era of the 1970s to the present, "there has been a theoretical crisis in corrections," whereby practices are a theoretical or logically mis-specified due to criminologists and policymakers who have "lost faith in rehabilitation but never gained faith in punishment" (Cullen and Jonson, 2016, p. 36). The lack of an ideological consensus for organizing frontline practices has produced aimless and generic "case management" frameworks that emphasize efficiency above effectiveness (Bull, 2010; Day et al., 2012), which has been exacerbated by rising caseloads and dwindling resources (Cullen and Jonson, 2016; Schaefer et al., 2016). Again, although some agencies routinely implement the "what works" aspects of community corrections, such efforts are rarely systematic or widespread (Cullen et al., 2017; Schaefer and Brewer, 2022). A review of Queensland's parole system, for instance, described community corrections as "antiquated and emaciated," requiring significant reforms "for the protection of the community" (Queensland Parole System Review, 2017, p. 1). Such criticisms are not new. More than 2 decades ago, the Reinventing Probation Council suggested that "agencies must start thinking outside the box for public safety, and design supervision strategies and programs for crime prevention and community betterment" (2000, p. 19).

Toward this end, Cullen et al. (2002) proposed that community corrections practices could be fundamentally reoriented by focusing on an oft-neglected element of the recipe for crime: opportunity. They suggest that environmental criminology may provide the theoretical framework for directing the goals and means of community corrections. Prior to describing an empirical investigation of the utility of such an approach to the supervision of DFV probationers and parolees, in the subsections that follow, we first identify the philosophies and practices embodied by "traditional" models of community corrections, then outline recent shifts toward opportunity-reduction frameworks.

Traditional Models of Supervision

Traditionally, probation and parole supervision has been oriented around two philosophies—the control of propensity and deterrence tactics—both of which exhibit conceptual shortcomings that impact their capacity for limiting reoffending (Whetzel et al., 2011; Miller, 2014; Schaefer et al., 2016). First, authorities frequently aim to *control* (rather than change) individuals' propensity for further offending. For instance, offenders are routinely directed to abstain from alcohol, even when alcohol may not be related to an individual's risk profile or when their offending and substance use are caused by some spurious third factor (such as deficient impulse control). Even amongst the initiatives that are described as "treatment" in community corrections, unfortunately, these efforts are often centered around non-criminogenic needs (i.e., the intervention is focused on things that do not actually cause that person's offending; Latessa et al., 2002) or are better described as service brokerage (e.g., putting clients in touch with accommodation providers; White and Graham, 2010; Hanser, 2013; Schaefer and Brewer, 2022). Although a noble goal on the surface, these efforts are not meaningfully rehabilitative, with little of the supervision process itself being oriented around more substantive correctional intervention (Solomon et al., 2005; Taxman, 2011; Smith et al., 2012; Raynor and Vanstone, 2015).

Second, probation and parole orders are often characterized by ineffectual threats of punishment for non-compliance with generic behavioral restrictions or prescriptions rather than the unique reoffending risks to which each supervisee is vulnerable (MacKenzie, 2006; Cullen and Jonson, 2016). Rules are poorly defined, monitored, and enforced, thereby hampering any possible deterrent effects we may hope to observe (Cullen et al., 2002; Schaefer et al., 2016). Meetings are organized around conversations that focus on the offender's compliance with these vague conditions; not only does this distract officers from activities that could facilitate behavioral change (Bonta et al., 2008; Taxman, 2008; Bourgon et al., 2011; Lovins et al., 2018; Schaefer and Brewer, 2022), it further emphasizes the control of conditions that may be only loosely tied to reoffending risk (Schaefer et al., 2016), with evaluations showing "little evidence that deterrence-oriented community corrections reduces recidivism on a reliable basis" (Cullen et al., 2017, p. 29).

Combined, these misguided and poorly operationalized philosophies result in contemporary probation and parole practices that are focused on case management instead of crime prevention (Bonta et al., 2008; Pew Center on the States, 2008; Burrell, 2012). As noted by Cullen and Gilbert, both historically and contemporarily, "correctional officials get paid to maintain order and not to rehabilitate" (2013, p. 211). The prioritization of order compliance and completion is thus inherently limited in the ability of community correctional supervision to effectively discourage recidivism (Cullen, 2002; Taxman, 2008, 2011; Schaefer and Brewer, 2022). It is an unfair conclusion to assert that "nothing works" in the routine administration of community corrections, as there is a growing body of evidence about how recidivism can be reduced amongst probationers and parolees; it may rather be the case that agencies have failed to (properly or widely) implement the "what works" evidence into everyday practices (Cullen et al., 2017).

Opportunity-Reduction Supervision

Stemming in part from a recognition of these limitations to routine probation and parole practices, scholars have called for community corrections to "be based on effective criminological research and theory" (Cullen et al., 2002, p. 30; see also Latessa et al., 2002; Cullen et al., 2017). Toward this end, Cullen et al. (2002) conceived that the theoretical frameworks, evidence of

effectiveness, and practical utility of environmental criminology (and crime science more broadly) may provide an advance for the philosophies and practices used in probation and parole.

Environmental Criminology

Environmental criminological theories differ from other explanations for criminal behavior in that they reframe the problem: Rather than exploring the roots of criminality, environmental criminology questions the conditions that make a crime occur (Clarke, 2010). The criminological truism that crime clusters in time and space has drawn scholars' attention to the features of those places that attract, generate, and facilitate offending (Schaefer, 2021). Although environmental criminology is comprised of diverse theories, methods, and practices (Wortley and Mazerolle, 2008; Schaefer et al., 2016), there is a central focus on the role of crime opportunities. One of the most notable illustrations of the importance of opportunity is observed in routine activity theory (Cohen and Felson, 1979). The theory outlines that crime occurs when three conditions converge in place and time: (1) a motivated offender (or an individual who becomes motivated when presented with an opportunity to offend), (2) a suitable target or victim, and (3) the lack of a capable guardian. Importantly, the everyday (generally non-criminal) behaviors of people bring them into contact with people, places, and precipitators that are criminogenic or help to protect them from exposure or vulnerability to such crime opportunities (Wortley, 2008). As such, individuals and organizations alike can develop very practicable solutions for disrupting these ingredients for crime, as the removal of even one element of this calculus is sufficient for prevention (Clarke and Eck, 2005). This simple but effective framework can have important implications for preventing reoffending among community corrections clients (Schaefer et al., 2016).

Environmental Corrections

Success may be limited when probation and parole authorities only generically address crime opportunities (Cullen et al., 2002; Schaefer et al., 2016), and evaluations show that vague deterrence tenets generally fail to reduce recidivism amongst community-supervised offenders (Cullen et al., 2017). Conversely, if community corrections agencies were to focus more seriously on the role of opportunity, the prospects for discouraging reoffending are made malleable. Merging the insights of environmental criminology with community corrections, the "Environmental Corrections" framework identifies two interrelated elements of opportunity-reduction that can improve probation and parole supervision. First, officers can engage offenders in interventions (through formal rehabilitative programming or through brief interventions conducted in routine case management meetings) that alter the ways they think about crime opportunities. Second, through targeted supervision conditions and revised routine activities, officers can restructure the kinds of opportunities for offending to which their supervisees are exposed. In this way, probation and parole officers act as problem-solvers who analyze each individual's reoffending risks based upon (1) the kinds of opportunities that have proven tempting previously and (2) the opportunity structures with which they are in routine contact. Officers carefully examine each individual's offense history (drawing on police accounts, court records, assessment results, and third party reports) to curate a risk profile of specific precipitators, and then imagine how these risks are embedded in space and time considering each client's routine (as detailed in a weekly time diary, for instance; see Schaefer et al., 2016). With this information in hand, officers can then work to steer probationers and parolees away from situations that have been demonstrated to be criminogenic while providing them with new ways of thinking about the chances to reoffend that remain (Cullen et al., 2002).

Environmental Corrections and Other Evidence-Based Practices in Community Corrections

In the same way that we observe place-based crime concentrations, penologists have likewise observed that corrections outcomes (such as sentencing trends and re-entry and reoffending measures) demonstrate spatial aggregations (Rose and Clear, 1998; Clear et al., 2003; Clear, 2005; Sharlein and Engstrom, 2018), influenced by features of those communities (Baglivio et al., 2015; Chamberlain and Wallace, 2016). Given these associations, it is sensible that probation and parole officers occasionally utilize techniques that are opportunity-focused, such as through efforts to limit supervisees' unstructured leisure time or associations with risky peers (Miller, 2014; Miller et al., 2015). The Environmental Corrections framework, first articulated by Cullen et al. (2002) and later elaborated by Schaefer et al. (2016), represents a shift from these *ad hoc* practices to a more formalized and systematic approach to the integration of opportunity-reduction into community supervision practices.

Likewise, there are clear examples of evidence-based practices in community corrections that share some of the elements utilized in Environmental Corrections, such as brief interventions focused on cognitive skills training [e.g., Staff Training Aimed at Reducing Rearrest (STARR; Robinson et al., 2011), Effective Practices in Community Supervision (EPICS; Smith et al., 2012), and Strategic Training Initiative in Community Supervision (STICS; Bonta et al., 2019)], and many departments integrate some degree of these models [e.g., the risk, need, and responsivity (RNR) principles (Andrews and Bonta, 2010), and core correctional practices (Dowden and Andrews, 2004)] into their routine practices. However, although the evidence-base of these effective practices has expanded substantially in the past few decades, leading penology scholars have argued that there remains a persistent "crisis in corrections" (Cullen and Jonson, 2016); agencies have been slow to incorporate organizing frameworks for their work, prioritize recidivism-reduction as the guiding philosophy, and use the best available evidence about the causes and prevention of crime (Cullen et al., 2017), at least in more methodological and systematic ways (Schaefer and Brewer, 2022).

Notwithstanding the contributions of other opportunity-reduction and targeted/tailored interventionist elements of the above-referenced innovations in probation and parole tactics, here we draw attention to the unique contributions

TABLE 1 | Comparison of Treatment and Control Groups.

	Whole treatment group (*n* = 1,681)		Whole control group (*n* = 1,296)		Hypothesis test		DFV treatment group (*n* = 194)		DFV control group (*n* = 187)		Hypothesis test	
	P/M	***SD***	**P/M**	***SD***	**Test**	**Sig.**	**P/M**	***SD***	**P/M**	***SD***	**Test**	**sig.**
Individual characteristics												
Age	31.96	10.25	32.61	9.98	t = -1.738	0.082	33.55	9.70	33.57	8.50	t = -0.022	0.983
Sex (0 = male)					χ^2 = 0.908	0.341					χ^2 = 7.286	0.007
Male	0.78		0.77				0.91		0.82			
Female	0.22		0.23				0.89		0.18			
Indigenous status					χ^2 = 44.720	0.000					χ^2 = 0.437	0.508
Aboriginal or Torres Strait Islander	0.77		0.87				0.18		0.16			
Not Aboriginal or Torres Strait Islander	0.23		0.13				0.82		0.84			
Risk characteristics												
Risk of reoffending score	10.22	8.93	9.73	5.53	t = 1.740	0.082	11.82	3.93	10.57	3.96	t = 3.053	0.002
Level of service					χ^2 = 17.694	0.001					χ^2 = = 4.998	0.082
Low	0.09		0.11									
Standard	0.38		0.44				0.43		0.55			
Enhanced	0.34		0.30				0.37		0.30			
Intensive	0.19		0.15				0.20		0.15			
Correctional characteristics												
Length of order (in months)	19.43	60.38	20.00	78.22	t = -0.224	0.823	10.46	6.32	11.72	6.22	t = -1.944	0.053
Number of prior orders	1.96	2.74	1.64	2.24	t = 3.463	0.001	2.20	3.48	1.37	1.86	t = 2.833	0.005

TABLE 2 | Interview participant characteristics.

Participants pseudonym	Sex, age	Order type	Order length	Index offence	Reporting frequency
Bill	Male, 25	Probation	18 months	Driving under the influence	Fortnightly
Dave	Male, 27	Probation	18 months	Breach of domestic violence order	Fortnightly
Frank	Male, 38	Probation	18 months	Domestic violence	Weekly
Holly	Female, 31	Probation	18 months	Assault	Weekly
Jake	Male, 31	Probation	12 months	Breach of domestic violence order	Monthly
Luke	Male, 35	Board-ordered parole	9 months	Domestic violence	Weekly
Nate	Male, 37	Intensive corrections order	6 months	Domestic violence	Weekly
Pete	Male, 47	Probation	6 months	Breach of domestic violence order	Monthly
Rick	Male, 48	Probation	9 months	Alcohol-related violence	Monthly
Tony	Male, 53	Court-ordered parole	3 months	Driving under the influence	Fortnightly

of a model that more explicitly integrates the contributions of crime science into community corrections. Under an Environmental Corrections model, officers identify each probationer and parolee's exposure and vulnerability to crime opportunities and then (1) develop supervision stipulations that limit that individual's access to those opportunities, (2) create routines that implement these opportunity-reduction efforts while also placing the individual into patterned contact with prosocial people and activities (so as to encourage long-lasting behavioral change, whereby unwanted conduct is not just eliminated but replaced), and (3) work with the individual to build opportunity avoidance and opportunity resistance skills. Readers will note that traditional forms of probation and parole supervision likewise rely on supervision conditions to steer clients away from risks of reoffending. However, we contend that these case plan stipulations (behavioral restrictions and prescriptions) tend to be generic and oriented around loose deterrence tenets (e.g., supervisees must refrain from associating with other known offenders), while the Environmental Corrections model more narrowly identifies and stipulates conditions that are related to each individual's risks for reoffending. Under an opportunity-reduction supervision framework, officers would tailor case plans to the unique opportunity-related risks that each client

exhibits (e.g., creating rules around a specific co-offender or victim). In this way, generic conditions are replaced with specific conditions, which can be easier to define, monitor, and enforce (Cullen et al., 2002; Schaefer et al., 2016) and are thereby less restrictive than the broad stipulations ordinarily administered in probation and parole orders. An evaluation of a trial of Environmental Corrections has revealed that the opportunity-reduction framework can effectively reduce recidivism (Schaefer and Little, 2020).

Current Study

In this study, we employed the quantitative and qualitative data from this same Environmental Corrections trial (Schaefer and Little, 2020) to focus explicitly on a subsample of probationers and parolees who are on community corrections orders for DFV offenses. Although there is ample evidence that opportunity-reduction tactics are reliably effective in crime prevention (Wortley and Mazerolle, 2008; Schaefer et al., 2016), and emerging evidence that these strategies may be useful for reducing reoffending in community corrections (Schaefer and Little, 2020), the reality is that DFV perpetrators present unique challenges for probation and parole authorities (Crowe et al., 2009; Spencer et al., 2020). Indeed, evidence demonstrates that many DFV perpetrators can at times engage in denial and victim-blaming behaviors (Henning et al., 2005), which can make preventing reoffending all the more difficult for officers required to discuss clients' offending with them. This situation is complicated by the evidence that many of the formal treatment programs used by correctional authorities for their DFV clients are ineffective (and at times criminogenic; Welsh and Rocque, 2014; Graham-Kevan and Bates, 2020). Some scholars have even suggested that the political tensions involved in government and community responses to DFV discourage the use of evidence-based responses (Bates, 2016).

Drawing on these collective insights, we suspected that Environmental Corrections may have utility for the reduction of reoffending with DFV probationers and parolees because of its targeted focus on opportunity rather than propensity. The causes of DFV are complex and many contributing factors are outside the scope of what community corrections agencies can reasonably address in short, periodic supervision meetings (such as gender ideologies and cultural norms, structural sexism, and deep-seated perpetrator comorbidities; Graham-Kevan and Bates, 2020). Yet by providing probation and parole officers tools to control the other ingredient of crime events—opportunity—there are practicable ways we can prevent DFV perpetrators from reoffending. Moreover, because DFV perpetrators find *specific* crime opportunities tempting (i.e., a particular victim, or a reliable precipitator that triggers a cycle of violence), it is imperative that corrections authorities consider the unique risks of these clients and develop supervision strategies that are tailored to addressing those factors. In this way, we hypothesized that an opportunity-reduction supervision framework may hold promise for DFV offenders servicing corrections orders in the community.

Within the trial, officers sought to first understand the reoffending risks unique to each client, based on information drawn from their offense history. The officer would examine the available information (such as police reports and psychologist assessments) to determine the stimuli that triggered the decision-making to commit the offense. Officers then worked with the client to discern how they spent their time, envisioning how these crime precipitators could be routinely encountered or avoided in an average day or week. From there, the officer collaborated with the client to develop a schedule that would help them to steer clear of these known risks; sometimes these were suggestions (e.g., Joe is encouraged to spend time at his mother's house or with his coach at the gym on Friday and Saturday evenings, which have historically led to idle time, "spiraling," and poor decision-making), while in other instances enforceable supervision conditions were put into place (e.g., Jane is permitted to visit with her children only in the presence of Child Safety staff; Tom must not enter the 1,600 block of Smith Avenue and must stay 500 m from Sue). For each client, the goal was to develop *routine activities* that sidestepped known opportunity risks while also placing exposing them to prosocial influences. Within supervision meetings, officers then engaged clients in brief interventions oriented around cognitive skills trainings (e.g., self-control, consequential thinking, problem-solving) so that remaining risks could be resisted if encountered. Importantly, the case plan for each offender (inclusive of supervision conditions, in-house interventions, and outsourced services and programs) was based on their individual risks for reoffending, although officers were encouraged to consider the available evidence about the known risk, criminogenic need, and specific responsivity considerations relevant to particular offense types (such as DFV).

METHODOLOGY

The Environmental Corrections framework was implemented in one Community Corrections office in a large metropolitan Australian city for 6 months in 2016. Our data for the current evaluation were drawn from this trial, where all staff and all offenders at the experimental site participated. Staff received a 2-day training on the model, including a coverage of opportunity-reduction theories and their relevance to probation and parole, tools for assessing opportunity-related risks and developing supervision conditions and new routines, and rehearsal of the techniques used in brief interventions that use cognitive skills training (oriented around opportunity identification, avoidance, and resistance). Consistent with environmental criminological theories and tactics, officers learned how to identify and interrupt these convergences of prospective offenders and suitable opportunities (examples of some of the tools used in the trial can be found in Schaefer et al., 2016). A researcher on the project attended the trial office to make observations and answer questions, performing booster trainings roughly monthly to aid in model fidelity.

To make inferences about the effects of the experimental intervention on reoffending, a comparison site (a Community Corrections office in geographic proximity with comparable client and offense characteristics) was selected to serve as the control group (see **Table 1**; for a fuller description of the

participants at both sites, see Schaefer and Little, 2020). The comparison site continued to deliver probation and parole supervision as "business as usual," utilizing a framework best characterized as a compliance-oriented and administratively focused form of case management. These routine practices did not contain any substantive elements of opportunity-reduction supervision or some of the leading evidence-based programs in community corrections (such as EPICS, STARR, or STICS).

Participants

Across the entire duration of the trial, the treatment group included 1,681 offenders, and the control group was composed of 1,296 offenders, for a total sample size of 2,977. For the majority of the quantitative analyses in this study, we were interested primarily in those individuals serving probation and parole orders who had DFV listed as their *index offense*. Individuals who were serving orders for other offenses that may have included DFV (e.g., stalking, assault, homicide, incest) were not included in these categorizations due to limitations in the data provided by Corrective Services for our evaluation. To help address this shortcoming, for the qualitative analyses in this study, we analyzed all interview transcripts of participants in the sample who *self-disclosed* DFV as being a *component* of the offenses that led to their current order, even in the event that DFV was not their index offense.

Including only those orders for DFV index offenses during the trial window, the total treatment group included 194 offenders (11.54% of the Office cohort) and the total control group included 187 offenders (14.43% of the Office cohort), for a total subsample size of 381 (noting that in any given month, fewer individuals may be on orders at that time due to differing times of order commencement and completion). Of these individuals, the overwhelming majority were male (86.61%) and not Indigenous (83.20%). At the completion of the trial, the average age of the subsample was 33.56 (SD = 9.12). Most of the probationers and parolees had served orders previously (60.89%; M = 2.16 previous orders, SD = 1.69). The average sentence length for the orders was roughly 1 year (M = 359.66 days, SD = 192.85). Using the agency's standardized measure for assessing risk of reoffending (an actuarial tool assessed as a valid and reliable indicator of recidivism risk), the mean risk score was 11.16 (R = 1–20 (20 being the highest level of risk), SD = 4.00). These risk scores indicate the client's level of service, which is then related to supervision intensity (such as reporting frequency). About half of the subsample was on standard level of service (48.03%; generally equates to monthly reporting), with smaller proportions on enhanced (33.07%; fortnightly reporting) and intensive (17.32%; weekly reporting) levels of service.

A comparison of the treatment and control group participants across these characteristics is showcased in **Table 1**. Comparing the entire treatment site (n = 1,681) vs. the control site (n = 1,296), the control site had a larger proportion of Aboriginal and Torres Strait Islander clients (87% vs. 77%; x^2 = 44.720, $p < 0.001$) and clients on average had fewer prior orders (M = 1.96, SD = 2.74 vs. M = 1.64, SD = 2.24; t = 3.463, $p < 0.001$); across the two sites, there was also significant variation in the clients' level of service (x^2 = 17.694, $p < 0.001$). Looking at only DFV clients, in relation to the comparison site (n = 187), the treatment site (n = 194) included a higher proportion of male probationers and parolees (91% vs. 82%; x^2 = 7.286, $p < 0.01$), a higher risk of reoffending score (M = 11.82, SD = 3.93 vs. M = 10.57, SD = 3.96; t = 3.053, $p < 0.01$), and more previous orders (M = 2.20, SD = 3.48 vs. M = 1.37, SD = 1.86; t = 2.833, $p < 0.01$). There were no statistically significant differences between the two DFV client groups with respect to age, Indigenous status, level of service, or sentence length. We return to these differences in our limitations subsection.

Data Collection and Analytic Procedures

Our quantitative analyses were performed using official data from the Department of Corrective Services. Unfortunately, the data available for analysis extends only to the completion of the trial (the 6-month intervention window), so we are unable to calculate the effect of the intervention across a longer follow-up period. However, this still provides a reasonable snapshot of the immediate effects of the intervention on offending behaviors. Our primary dependent variable of interest for this study is reoffending, which was operationalized as a new offense as recorded by police. Although this measure provides a good indication of reoffending, it is important to note that (1) it does not capture criminal activity undetected by police and (2) it may include individuals who have the charges dropped or are found not guilty. Experts acknowledge that the actual prevalence of DFV is unknown (Mouzos and Makkai, 2004), although rates of DFV offending are likely to be much higher than what is known to police (Australian Institute of Health and Welfare, 2019). Readers should also note that our reoffending measure relates to *any* criminal charge. The data made available to the research team did not enable us to explore whether the reoffence related to further DFV behavior.

The qualitative analyses in this study were conducted with transcripts from semi-structured interviews performed with participants in the Environmental Corrections trial. Approximately 3 months post-intervention, data collection took place across a 2-week window. During this period, as required by Corrective Services, officers extended an invitation to participate in the interview to the probationer or parolee following their routine case management meeting. When individuals expressed interest in participating in the study, a trained Research Assistant met with the individual in a private room, provided information about the project and obtained informed consent, then completed the interview and debriefing procedures. In total, 119 invitations were issued and 53 were accepted, for a response rate of 44.54%. Of these 53 interviews, for this study we isolated a subsample of the participants who identified DFV as a component of the offending episode that led to their current probation and parole order (n = 10; 18.87% of the interview participants). This included 3 participants who had DFV as their index offense, three participants who had a breach of their DVO as their index offense, and 4 respondents who self-reported DFV as part of the reason for their current order. Brief participant characteristics are listed in **Table 2**.

The interviews were semi-structured, following an interview guide with questions and prompts related to the participant's

history of offending, experiences on probation or parole, efforts to desist, and goals/expectations for the future. The interviews ranged from 12 to 48 min (M = 23, SD = 10) and were audio recorded, transcribed verbatim, and de-identified for the analyses used in this study. The interview transcripts were analyzed according to Braun and Clarke's (2006) six-step method for thematic analysis, whereby we (1) became familiar with the data, (2) developed initial codes, (3) searched for themes, (4) reviewed the themes against the data and revised them as needed, (5) named and defined the themes, and (6) wrote our results. Given our understanding of the Environmental Corrections trial in which these interviews were situated, for these analyses, we extracted interview excerpts that related to crime opportunities generally and sought to contextualize these findings in the broader literature of environmental criminology and opportunity reduction. From these excerpts, our analytic approach embraced a phenomenological, grounded framework whereby themes emerged organically from the data through the iterative process described above.

RESULTS

Domestic and family violence (DFV) perpetrators present unique challenges for probation and parole authorities who supervise these individuals in the community (Crowe et al., 2009; Spencer et al., 2020). In this study, we speculated that the Environmental Corrections framework (Schaefer et al., 2016) may be useful with this cohort of offenders compared to other offender types in the same jurisdiction, given its emphasis on targeted opportunity-reduction strategies rather than generic deterrence tactics or exclusive efforts to address criminal propensity (especially given that DFV clients are likely to have complex criminogenic needs; Crowe et al., 2009; Graham-Kevan and Bates, 2020; Spencer et al., 2020). A previous evaluation of a trial of Environmental Corrections demonstrated a 28% recidivism reduction for the treatment group compared to a propensity score matched control group (Schaefer and Little, 2020) and revealed several important benefits for the clients supervised under this model (Williams and Schaefer, 2021). Here, we analyze these same data (although we were unable to use comparable propensity score matching techniques) using a mixed methodology to explore whether the model has any unique relevance for DFV probationers and parolees.

Quantitative Analyses

Across *all* probationers and parolees, following 6 months of the Environmental Corrections intervention, 32.39% of the control group participants incurred a police-recorded reoffence (for any crime type, not just DFV), compared to 26.50% of the treatment group. This represents a 18.18% raw recidivism reduction, which was statistically significant at the $p < 0.05$ level ($\chi^2 = 4.905$). Performing the same calculations with only those individuals serving probation and parole orders for DFV index offenses, at the completion of the trial, 32.84% of the control group had reoffended, compared to 27.78% of the participants in the experimental condition. Although DFV probationers and parolees had slightly higher reoffending rates than other offenders (i.e., those on community supervision orders for other offense types) at both the treatment site ($\chi^2 = 0.061$, $p = 0.804$) and the comparison site ($\chi^2 = 0.010$, $p = 0.921$), these were not meaningful differences. Looking at only those clients on orders for DFV offenses, there was no significant difference in rates of contravention (technical violations of supervision conditions that do not constitute a new offense) between the control group (17.70%) and the treatment group (15.56%; $\chi^2 = 0.970$, $p = 0.325$).

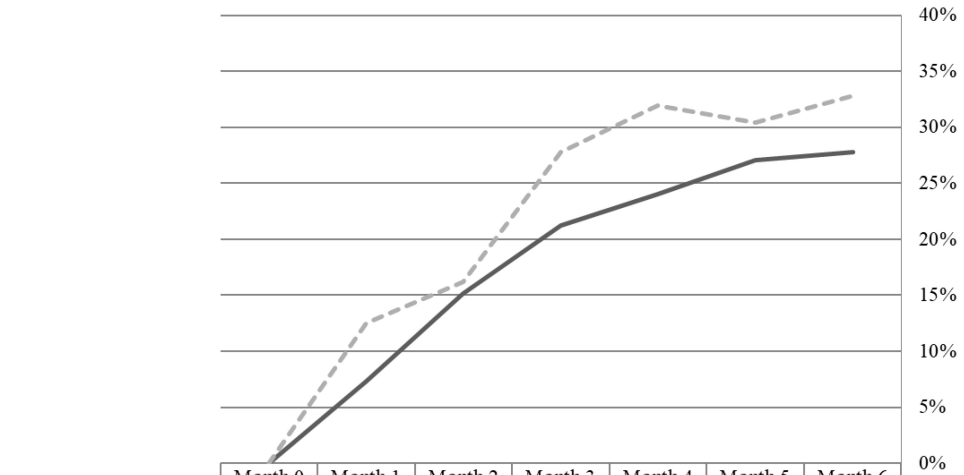
The cumulative rates of reoffending amongst DFV offenders plotted in **Figure 1** demonstrate a 15.41% reduction in recidivism between the two groups, although the difference was not statistically significant ($\chi^2 = 0.421$, $p = 0.516$). We speculated that these raw differences in reoffending across the two groups at the completion of the trial perhaps failed to reach statistical significance given the smaller subsample for the DFV probationers and parolees compared to all offenders. We further considered that there may be unaccounted for differences between the two groups (given that this was a quasi-experiment with no random sampling or assignment; see **Table 1**). We therefore performed a binary logistic regression to determine whether these small group differences would reach significance after statistically controlling for several important covariates of risk. As seen in **Table 3**, although the odds of a police-recorded reoffence (for any criminal charge) at 6 months post-intervention were 21.50% lower for DFV Environmental Corrections trial participants, this was not a statistically significant difference even in light of the other variables in our model. The only significant predictor was sentence length, with the odds of reoffending increasing for longer orders, perhaps indicative of the effects of exposure or "street time" (given that the risk of reoffending score was not statistically significant).

Qualitative Analyses

We performed a thematic analysis of 10 interview transcripts from probationers and parolees in the Environmental Corrections trial who had DFV involvement in their current offense/order. We extracted all interview excerpts that related to the role of opportunity (n = 148) and categorized these into three themes: causes of offending (n = 31; 20.95%), desistance from offending (n = 65; 43.92%), and supervision (n = 52; 35.14%). From there, we further coded each excerpt into relevant subthemes. In the subsections that follow, we unpack some of these subthemes (noting that they may tally to greater than 100%, as an excerpt within a theme may be related to more than one subtheme), using pseudonyms to identify participants.

Causes of Offending

Of the 31 interview excerpts related to our participants' (perceived) causes for their DFV offending, four subthemes emerged: routines, anger, reversal, and reframing. Most notably, respondents identified *routines* (n = 12; 38.7%) as being more or less criminogenic. This may have been due to boredom ("Now I'm working and stuff, I'm not at home all the time now and just constantly thinking about stuff. I'm not bored



	Month 0	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Treatment Office	0.00%	7.32%	15.19%	21.25%	24.05%	27.03%	27.78%
Control Office	0.00%	12.50%	16.22%	27.78%	31.94%	30.43%	32.84%
Chi-squared value		1.171	0.030	0.877	1.169	0.203	0.421

FIGURE 1 | Cumulative rates of reoffending post-intervention.

anymore, so I think most of it [offending] was because of boredom."—Dave), such that keeping busy is associated with breaks in offending ("Boredom, to escape reality. . .[now] I start thinking about doing something around the house, fixing something, going to the park, kicking the footy around."—Frank). However, many identified that *anger* (n = 8; 25.8%) could override these intentions ("When you're mad you do things that you wouldn't normally do."—Bill), particularly in ways that seemed to short-circuit their ability to exercise foresight ("I get really angry and I don't really think about the long run. I don't really think of what's going to happen after the—I don't think of the consequences or anything. I just go and do it. Then once I've done it and I've been in trouble, I think, 'Oh my god'."—Holly).

Although these two subthemes revealed important insights into the catalysts of crime, our participants also showcased forms of denial about their offending, such as through *reversal* (n = 7; 22.6%), in which the perpetrator blamed the victim for the offense ("Well most of it was false accusations. . .because she was envious of me and [my relationship with] the kids."—Frank) and saw themselves as the aggrieved ("I know everyone says they're innocent, but what happened to me wasn't my fault. I mean, this person - I didn't want to see him anymore. He came in and broke into my house."—Tony). On a few occasions, individuals did not turn the tables as such, but engaged in a *reframing* (n = 5; 16.1%) of their offense. This came through when individuals tried to distance their current self from past indiscretions ("Look, I did [assault her] ages ago when we first started going out. I did in the first couple of years but not recently like she was stating."—Rick), or through impression management efforts to justify their behavior ("I was just mostly mad at myself, because I wasn't supporting my girlfriend and bringing in any income or anything to the house. So that's what also made me mad, but it wasn't at her. It was just at myself and I'd snap but it wasn't meant to be a snap towards anybody."—Dave). Combined, these excerpts showcase that the probationers and parolees interviewed as part of the trial may have some important understandings about the causes of their DFV, but that inappropriate and inaccurate rationales remained. Critically, however, this may not be an issue insofar as the Environmental 'Corrections framework emphasizes opportunity-reduction rather than propensity-reduction, a point we return to in our discussion of these results.

Desistance From Offending

Our analyses revealed 65 interview excerpts that described participants' efforts to desist from offending, again with four subthemes observed in the data: social supports, routine, avoidance, and consequential thinking. Most commonly, respondents highlighted the role of *social supports* (n = 27; 41.5%) in motivating their efforts to cease undesirable behaviors ("It's mainly because of my kids."—Luke). Their family and friends facilitated desistance in multiple ways, ranging from emotional support ("Some do it by not acknowledging it and ignoring it and just treating me like a normal person. Some do it by getting up you all the time. Some do it by being compassionate. They all do it differently."—Jake), to concrete support ("They've given me a place to go where I can get food and stuff. . .Showing me where to go to get Medicare cards and how to go about going to a GP and stuff like that. Because there's a lot of this stuff I don't know."—Bill), to loved ones acting as "crime controllers" ("My mate's good for it, yeah. I'll just sit there and drink mine slower and once he knows I've had a couple, once he sees I've had two he says, 'Oh let's go, we'll go now'."—Pete). Our interview participants likewise highlighted how a new *routine* (n = 24; 36.9%) had helped them to reduce their reoffending, through general busyness with prosocial goals ("My lifestyle is quite busy now. I keep myself occupied with good things. I have goals now, whereas before, I didn't."—Tony) and through (often new)

TABLE 3 | Binary logistic regression predicting reoffending.

	exp(β) (S.E.)	Sig.
Individual characteristics		
Age	0.949 (0.031)	
Sex (0 = male)	1.248 (0.594)	
Indigenous status (0 = not Aboriginal or Torres Strait Islander)	1.167 (0.507)	
Risk characteristics		
Risk of reoffending score	1.015 (0.059)	
Number of risk domains assessed as high-risk	0.888 (0.098)	
Correctional characteristics		
Length of order	1.002 (0.115)	*
Number of prior orders	1.004 (0.115)	
Environmental corrections participant (0 = no)	0.785 (0.394)	
Model information		
Intercept	0.893 (1.459)	
-2 log likelihood	160.061	
Model χ^2	17.762	*
Nagelkerke R^2	0.101	
N	381	

*$p < 0.05$.

prosocial peer influences ("I'm in a happy space because a lot of people around me are in a happy space."—Rick).

More narrowly, some individuals identified how they have varied their routines to use *avoidance* to their benefit (*n* = 19; 29.2%), which at times overlapped with routines ("Instead of going to the pub every afternoon, I take my dog for a work or I'm out in the garden or whatever."—Tony) and certain criminogenic associates or environments ("I don't hang out in those places where they are, houses, clubs or where they do [drugs] - so, I pretty much don't see them, all those people anymore."—Rick). Some of our respondents highlighted how the *consequential thinking* (*n* = 4; 6.2%) skills they learned during the Environmental Corrections trial contributed to the improvements they observed ("Look at the options, look at the reactions to which one you choose, and choose the best one."—Jake). Across these subthemes, our participants were able to identify and articulate various motivations and mechanisms for preventing their own offending which often showed areas of overlap with the evidence of how to prevent crime through the reduction of opportunities.

Supervision

We extracted 52 interview excerpts from our DFV participants that related to the theme of supervision. Of those, two subthemes emerged: intervention and routine. First, our respondents frequently discussed the role of *intervention* (*n* = 40; 76.9%) in their case management meetings and the effects these mini-treatment efforts were having on their day-to-day life. Many individuals described particular cognitive skills trainings they did with their supervising officer that related to anger and/or consequential thinking ("She gets me to do this five-step thing when I usually get angry, because I usually used to get angry and just snap for no reason. . .[Previously] I just went off and that was it. That's pretty much why I ended up here really."—Dave). Some of our respondents related these interventions to their DFV perpetration specifically. For instance, Holly described:

"We put a goal plan in place. Talked about our goals and to try and think ahead. We wrote a goal sheet thing out. Really big piece of paper. She just put lots of goals and then facts. For me to think ahead of my actions instead of actually following through with them. Because when I get really angry and in that moment I get, I aim to - I could do anything silly and it will just breach my DVO. It would breach my thing. So she tries to teach - tell me to think before I actually take action. Just think of the pros and cons. If I'm going to go over there just try and think about what's going to happen if I did go over there."

Participants also noted how their case management meetings were used to discuss and modify their *routine* (*n* = 13; 25.0%), which helped them to identify and navigate some of the lifestyle factors that may have led to their offending in the first place ("When I first came out, I'd run into certain people and they would talk with me. . . it's easy to fall because that's when I felt most risk. . .but I got a good corrections officer - otherwise I could've just gone and just done my thing again."—Rick).

Taken together, these two subthemes of routine and intervention in relation to supervision highlight the impact of opportunity-reduction supervision for these probationers and parolees. For instance, although *routine* was a subtheme in the interview excerpts related to the causes of offending, it also emerged as a feature of supervision; indeed, some observed how the lack of a structured schedule may be criminogenic but that their officer was assisting with that ("A lot of people that do offences don't have any sort of routine, so it's [supervision requirements] the first step of having a routine."—Jake). Although the probationers and parolees supervised at the Environmental Corrections site were not made aware of the experimental trial, some of the interview participants were able to identify a clear shift in supervision practices based on the more interventionist style of case management they were receiving from their officer. For example, participants described how, "[Officer] asked me have I had any problems in the last 2 weeks where I thought I could've made a better decision type thing. I've never experienced that before from a parole officer." (Tony), "Just how now we sort of write things down and go through them and set goals to aim for. Whereas before it was just like she just keeps asking how things are and what I've been up to rather than pinpointing certain issues and things that are going on." (Luke), and "Before you just go in and sign your paper or whatever and stand for 5 minutes and just walk off. Now, they actually like – It's good. They do activities for you and stuff to get into if you actually want to help yourself." (Nate). It seemed evident in our data that the clients involved in the trial were able to identify a difference, and that many of them felt these changes were beneficial.

DISCUSSION

Corrections departments are managing record numbers of offenders, driven in part by high rates of recidivism (Australian Government Productivity Commission, 2021). At the same time, government agencies are facing increased political and public pressure to address DFV. At the crossroads of these realities are community corrections officials who must navigate the supervision of DFV probationers and parolees, many of whom exhibit unique risks and challenging criminogenic needs (Crowe

et al., 2009; Graham-Kevan and Bates, 2020; Spencer et al., 2020). These individuals may not be randomly motivated when crime opportunities present themselves but may instead be more predatory; there are *specific* precipitators that community corrections officers must be mindful of, so generic deterrence strategies may not be effective with this cohort. Studies show that formal interventions with DFV perpetrators are often unsuccessful (Graham-Kevan and Bates, 2020), in part because they may be inclined to minimize or deny their misconduct or blame the victim (Henning et al., 2005), making it difficult for officers to have meaningful conversations with offenders about their behavior and efforts at reform.

For these reasons, we speculated whether a different tactic may be useful. Rather than officers focusing too heavily on propensity (which is deep-rooted and can be difficult to change in the context of brief, periodic supervision meetings)[4] or deterrence (in the form of loose supervision conditions accompanied by the threat of subsequent punishments), perhaps greater success could be observed if we focus on the external situations that convert or catalyze underlying motivation into criminal activity. Recent advances in community corrections scholarship show that opportunity-reduction tactics may be useful in steering offenders away from chances to reoffend (Miller, 2014; Miller et al., 2015; Schaefer and Little, 2020), an important divergence from mainstream supervision frameworks that rely on generic deterrence strategies or bureaucratic forms of case management that emphasize order compliance rather than behavioral change (Cullen, 2002; Bonta et al., 2008; Pew Center on the States, 2008; Taxman, 2011; Burrell, 2012; Schaefer and Brewer, 2022). Merging the theories and methods of environmental criminology with community corrections, Schaefer et al. (2016) have proposed an "Environmental Corrections" framework. Under this model, officers create new routine activities for offenders that keep them away from unique risks to reoffend while also increasing their exposure to prosocial influences. At the same time, officers intervene with their supervisees to develop cognitive behavioral skills in identifying, avoiding, and resisting the crime opportunities that are bound to remain in each client's environment. In this study, we utilized a mixed-methodology to evaluate the utility of this model with DFV probationers and parolees.

Using a quasi-experimental design, our quantitative analyses revealed that the Environmental Corrections trial reduced police-recorded reoffences by 18.18% in the treatment group compared to the control group when examining *all* offenders. Examining only DFV offenders, the difference in the rate of reoffending at 6 months post-intervention reduced to 15.41% (whereby 27.78% of the treatment group reoffending compared to 32.84% of the control group). We believe that this reduction is substantively meaningful although not statistically significant (for discussions of the interpretation and limitations of *p*-values, see Amrhein et al., 2019; Kuffner and Walker, 2019), perhaps highlighting the need for additional trials and evaluations with larger sample sizes and an extended follow-up window. It is important to point out that the rates of reoffending did not differ significantly between DFV offenders and all other offenders at the treatment or comparison site, and that there were no significant differences in rates of technical violations. As such, although our findings do not meet the traditional thresholds for statistical significance used in the social sciences, the results do indicate that opportunity-reduction supervision may hold promise in minimizing reoffending among DFV probationers and parolees. Accordingly, we contend that these results are of substantive significance, especially considering the impacts and harms resulting from DFV (Rollé et al., 2019).

Given these results, we examined the perspectives of DFV probationers and parolees at the trial site to explore the impact of the Environmental Corrections framework. We analyzed the transcripts from semi-structured interviews with 10 supervisees who identified DFV as a component of their offending that led to their current order. Our participants highlighted many of the evidence-based theories and practices used in environmental criminology and crime science, such as the role of routine activities in being more or less criminogenic, the utility of avoidance (of risky people, places, and provocations), and the impact of "offender handlers" (Clarke and Eck, 2005; Wortley and Mazerolle, 2008; Clarke, 2010; Sampson et al., 2010; Schaefer et al., 2019). The brief interventions performed in officer-offender meetings also appeared to be influential, with several of our participants articulating the everyday uses they were finding for these cognitive skills (such as consequential thinking).

Research demonstrates that many DFV perpetrators at times exhibit minimization, denial, and victim-blaming (Henning et al., 2005), and many of our formal rehabilitation efforts with these correctional clients are ineffective (Graham-Kevan and Bates, 2020). Indeed, our thematic analysis revealed that some of the DFV probationers and parolees used reversal and reframing to sidestep the root causes of their misconduct, although others indicated that anger and poor consequential thinking are related to their offending. Partly for this reason, we speculated that an opportunity-reduction supervision framework may be useful with DFV clients (compared to other offense types in the same jurisdiction), given its focus on opportunity rather than propensity. We speculated that targeted supervision conditions could help to keep DFV offenders away from real risks for reoffending, rather than trying to alter their criminal etiology or convince/threaten them to make more rational (prosocial) choices. For instance, an evaluation of the impact of community treatment on male batterers showed that they were not deterred by expectations of formal or informal consequences, and that motivation was unrelated to recidivism (Hanson and Wallace-Capretta, 2004). Although common "treatment speak" endorses the notion that individuals must recognize their problematic behavior and its roots in order to effectively address it, this is at odds with the evidence about the efficacy of opportunity-reduction crime prevention (and the limited function of motivation) more broadly.

All of these findings combined, we suggest that opportunity-reduction frameworks may be useful for the community supervision of DFV probationers and parolees, although further

[4]We are not discounting the importance and potential utility of formal rehabilitation efforts, such as standardized and validated curriculum-based programs or treatment efforts performed by qualified personnel (e.g., forensic psychologists, psychiatrists, substance abuse counselors). Rather, here we wish to emphasize the role of probation and parole staff in routine supervision meetings with their clients.

evaluation is needed. We are inclined to believe that dosage may be important here, although more extensive trials would be required to confirm. Given that the trial was only 6 months long, offenders may have had minimal contact with their supervising officer (e.g., a DFV probationer on monthly reporting would have had only six case management meetings). Our data revealed that more visits to the probation and parole office during the trial was associated with *more* reoffending ($t = -5.260$, $p < 0.001$), although this is likely due to the confounding effects of reoffending risk levels. We have reason to believe that an opportunity-reduction framework for community supervision may be more or less effective for certain types of offenses and/or correctional clients, although the data for the current study do not allow us to sufficiently attend to some of these hypotheses. A rigorous experimental trial would help to resolve some of the questions that our data do not enable us to answer. In any event, the growth curves in **Figure 1** appear to demonstrate that opportunity-reduction supervision tactics limit reoffending compared to business-as-usual in probation and parole.

Limitations and Directions for Future Research

The contributions of our study notwithstanding, there are several shortcomings that contextualize our results, providing important implications for further study. As described above, we had limitations in our measurement window, sample sizes, and ability to fairly compare the treatment group and the comparison group. Indeed, some of the differences between the two groups may have been due to underlying characteristics rather than the effects of the pilot test (see **Table 1**), and it may be that "doing something" was better than "doing nothing" (i.e., business-as-usual) rather than specific elements of Environmental Corrections. An experimental trial (or at a minimum, a more rigorous quasi-experiment) would help to address these complicating factors. Our quantitative analyses would have benefited from a longer follow-up period and more fine-grained measurements of DFV. Additionally, since the prevalence of DFV is difficult to estimate (Mouzos and Makkai, 2004; Australian Institute of Health and Welfare, 2019), additional measures of reoffending (such as self-report data in addition to reconviction and reimprisonment variables) are required. Although the sample size for our qualitative analyses is acceptable for studies that explore the commonalities of lived experience in a somewhat homogenous sample (Creswell, 1998; Kuzel, 1999), additional qualitative investigation is necessary. Specifically, we urge researchers to sidestep the inclination to exclusively investigate the motivations for DFV perpetration, and more thoroughly explore the role of crime opportunities in facilitating and preventing these (re)offenses.

Implications

Although further research is required, the results of our study provide preliminary and cautious support for the notion that the supervision of DFV probationers and parolees could be augmented by moving beyond a compliance-oriented model (Spencer et al., 2020). According to the principles of effective correctional intervention (Andrews and Bonta, 2010), the risk principle stipulates that the intensity of the intervention should be commensurate with the offender's degree of risk (which should be gauged through actuarial assessment). Although this principle is often interpreted in the context of treatment (i.e., high-risk offenders require more intensive treatment than low-risk offenders), it can also be applied through the lens of supervision intensity (Schaefer and Brewer, 2022). However, rather than having control-focused conversations, officers can make meaningful impacts with their supervisees when the discussion is centered around behavior change (Bonta et al., 2008; Taxman, 2008; Robinson et al., 2012; Smith et al., 2012). We believe that the findings of our study demonstrate the potential value of altering unique risk-related behaviors for individual DFV offenders through a framework of opportunity-reduction supervision. Rather than efforts that exclusively seek to alter the motivations or etiology of DFV probationers and parolees or emphasize generic deterrence tenets, research should further investigate the utility of officers working with these offenders to minimize opportunities for reoffending in a targeted and tailored way.

DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available because data are available only to authorized users as granted by the Department of Corrective Services. Requests to access the datasets should be directed to corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Griffith University Human Research Ethics Committee. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

LS, GW, and EM contributed to conception and design of the study. LS performed the statistical analyses. GW developed the qualitative methodologies used in the project. LS wrote the first draft of the manuscript with subsections authored by EM and GW. All authors contributed to manuscript revisions, and have read and approved the submitted version.

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BRIEF RESEARCH REPORT
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Trivialization of Aggression Against Women in India: An Exploration of Life Writings and Societal Perception

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Purpose: Aggression, or an action that intend to harm, encompasses different forms with varying intensity, impact, and salient features. Globally and in Indian context specifically, aggression against women is often normalized if there is no physical aggression involved as the hurt caused tends to be invisible. The current study explored the perceived intensity of physical, verbal, and sexual aggression among south Indian adults.

Method: Aggressive instances from the life writings of two south Indian women were chosen and were rated by five independent coders to check inter-coder reliability. The select narratives disclose instances of domestic aggression. Ten instances with highest ratings were chosen as the material for data collection. Adults (N = 145) from two southern states had reported the perceived intensity of aggression in each context. Textual analysis and ANOVA were the analytic techniques adopted.

Results: The results indicate trivialization of verbal aggression compared to physical and sexual aggression. Further, the instances of verbal or more subtle aggression were perceived as even more trivial when the respondents got exposed to the instances of explicit physical and sexual aggressions first.

Conclusions: The findings indicate trivialization of verbal and implicit forms of aggression, particularly when exposed along with physical and explicit forms of aggression. Consequences of different forms of aggression were not considered significant by the respondents. Suggestions for further studies, changes in policy-making, and law-enforcement were made based on the current results.

Keywords: life writing, verbal aggression, physical aggression, sexual aggression, normalization, trivialization, gendered aggression, domestic violence

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INTRODUCTION

Aggression against women, often used by patriarchal societies to control women, is indeed a significant issue that still remains intense and frequent in the Indian society. Historically and cross-culturally, the overt use of physical and sexual violence has functioned as a key mechanism for perpetuating patriarchal control (Kreft, 2020; Santos et al., 2021). Further, studies also show that violence is not always perpetrated as a form of physical aggression but can also be psychological

or verbal (Goessmann et al., 2021). Often while giving significance to physical aggression, as the hurt caused will be in most cases instantly visible, other forms of aggression like verbal and sexual aggression tend to be trivialized, marginalized or at times normalized.

Life Writing, defined by Leader (2015) as "a range of writings about lives or parts of lives, or which provide materials out of which lives or parts of lives are composed", has been adopted by women writers as a medium to express resistance to the patriarchal ways of the society whereas tradition and culture continue to impose certain aggressive strategies against women to control them that further deem to be normal or acceptable. Domestic violence is frequently being perceived as 'normal' within different societies (Chester and Joscelyne, 2021). In the Indian context, mostly when women are being abused and their human rights violated, which cause both physical and psychological harm, the major reasons stem from societal traditions and culture (Dutt, 2018).

In Social Psychology, aggression is defined as "a behaviour that is intended to harm another person who is motivated to avoid that harm" (Allen and Anderson, 2017). Physical aggression implies causing physical harm that include kicking, punching, beating etc. whereas, using words to hurt others by calling names, yelling, screaming and so on is considered as verbal aggression (Bushman, 2019). Sexual aggression involves any forms of sexual behaviour toward a person who does not or cannot consent (Basile and Saltzman, 2002).

Cultural factors contribute to violence against women in India and the literature reports the torments women undergo for the sake of customs based on religious beliefs that may even result in death (Jaising, 1995). Interestingly, a systematic review reveals that the published quantitative studies for a decade report higher prevalence of physical abuse compared to psychological abuse and sexual abuse (Kalokhe et al., 2017). This further raises the question that whether physical aggression or violence is more prevalent or whether the society trivializes and normalizes forms of aggression other than physical aggression. In order to answer this question the current study has adopted textual analysis as well as a social survey to understand the nature of aggression perpetuated against women and the societal perception about the same.

Purpose of the Study

The current study attempts to determine if verbal and sexual aggression tend to be trivialized in comparison with physical aggression in the context of domestic violence.

METHOD

Materials

For the current study, two text books—Jaishree Misra's "Ancient Promises" (Misra, 2000) and Meena Kandasami's "When I Hit You" (Kandasami, 2017)—where chosen. Initially, all major published life writings published between 2000 and 2020 by a contemporary South Indian female writer were considered for inclusion, out of which the books that did not elaborate on domesticity were excluded. The life writings with no English translation were also excluded. From the two text books, all instances where aggression against the protagonist was displayed were listed out. The list was given to five independent coders and asked to rate the suitability of its inclusion on a 10-point rating scale. They were also asked to label the instances as "Physical Aggression," "Verbal Aggression," and "Sexual Aggression." Based on the highest scores, 10 instances (four Physical Aggression, four Verbal Aggression, and two Sexual Aggression, equally from both books) were chosen that obtained highest total rating from five coders. Additionally, two instances of non-aggression were also chosen, one from both texts. These two items were used as a "Lie Scale" and the scores of those participants who had scored one or above were excluded from the data for analyses, considering that they had either responded randomly or they did not comprehend the meaning of the items. The 12 items were presented to the respondents who were asked to rate the perceived intensity of each instance on a 11-point scale from "0" to "10", "0" indicating "no aggression" and "10" representing "extreme aggression."

An instance from "Ancient Promises": *It didn't take long for me to start hating myself for the many different things that gave the in-laws reason to slap their knees and laugh until tears ran down their cheeks. For my mother having omitted to teach me how to cook; for not being able to speak Malayalam elegantly; for forgetting constantly not to mind my Pleases and Thankyous; for having been brought up in Delhi; for having had an aunt who, in the nineteen- twenties, had an affair that everyone in Kerala(except me) had heard about. There was so much to be ashamed of.*

An instance from "When I Hit You": *He kicks me in the stomach. 'Prove it!' he yells as I double over. 'Prove it to me that you are my wife. Prove it to me that you are not thinking of another man. Or I will prove it for you.' My hair is gathered up in a bunch in his hand now. He is lifting me by my hair alone. All the blood is rushing to my head, my thighs fight to feel the hard wood of the chair. I am in pain.*

Participants

Adults from two south Indian states—Kerala and Tamil Nadu (N = 145; female = 108, male = 35, not disclosed = 2) had responded to 12 items that intended to assess their perception about different instances of aggression portrayed in the chosen text books. The participants were recruited through convenient sampling. Most of the participants (N = 113) belonged to the age 18-30, 30 participants were aged between 31 and 50, and the remaining two participants were over 51. A total of 83 individuals were unmarried, 60 of them married, and one person was divorced. Thirty-six participants hailed from rural regions, 47 from semi-urban areas, and 62 from urban areas. More sociodemographic details of the participants are given in tabular form as **Supplementary Material**.

Procedures

Mixed method was used for the current study containing qualitative textual analysis and quantitative measures to assess the perception of participants about the intensity of aggressive

instances described in the chosen texts. Considering the possibility of priming that might influence the participants' responses, three forms of the assessment were prepared with different orders of presentation—(1) begins with instances from "Ancient Promises" (considerably mild verbalization of aggression) followed by the instances from "When I Hit You"; (2) begins with instances from "When I Hit You" (considerably intense and explicit expression of aggression); and (3) mixed. Based on the presentation order, participants were divided into Group 1, 2, and 3. Group 1 was administered with the mixed presentation of instances, Group 2 was given less intense instances first, and Group 3 was exposed with the intensely aggressive instances first.

Remuneration

One randomly chosen participant each day were remunerated with INR (Indian Rupee) 50 if they responded to all the items and obtained zero "Lie Score."

Ethical Considerations

The participation was voluntary and all the participants were informed that the items contained sexual and aggressive instances. They were also informed that they were free to withdraw from the study at any point of time without giving a reason.

RESULTS

The results of the study are summarized in the following tables.

DISCUSSION

The current study has utilized life writings of select women that reflect the societal attitude about physical, verbal, and sexual aggression toward women, along with responses from a sample population from the same society who had exposed to the instances of violence depicted in these books. Both Misra's and Kandasamy's life writings reflect the aggression the authors had to endure after their marriage, and further narrates their efforts to come out of the abusive relationship. Reinharz posits voice as "having the ability, the means, and the right to express oneself, one's mind, and one's will. If an individual does not have these abilities, means, or rights, he or she is silent" (Reinharz, 1994). "To speak and to be heard is to have power over one's life" (Ahrens, 2006). The select writers have overcome silence and reclaimed their voice opting to write that episode of their lives when they were mere victims of domestic abuse. Misra's Ancient promises, a fictionalized biography, discusses the protagonist, Janaki's, struggle to gain acceptance of her husband and in-laws. Janaki in the due course had to encounter mainly verbal aggression, and at times sexual and physical aggression. However, this very reason makes the writer trivialize the aggression she had to endure by comparing it with an acquaintance who is physically abused by her husband. In the narrative, she reiterates that the behaviours meted out at the in-laws are not serious enough to be complained about despite its adverse effects on her health and well-being. Kandasamy, on the other hand, has written more about physical and sexual aggression than verbal aggression. She attempts to resist the physical assaults and finds means to save herself rather than the marriage, unlike Misra. She was also more vocal about the aggression most probably because she had endured physical and sexual aggression that seemingly overpowered the verbal abuses.

The select life writings of renowned South Indian authors, Jaishree Misra and Meena Kandasamy reveals how aggression tends to be normalised in women's everyday life, especially within the family. Misra's "Ancient Promises" and Kandasamy's "When I Hit You: The Portrait of the author as a Young Wife", extensively narrate the episode of a difficult marriage which the authors had to confront, and their struggles to come out of it. Both the life writings expose different forms of aggression including but not limited to physical aggression, verbal aggression, relational aggression, and sexual aggression. This article, however, focuses on analysing the select instances of verbal, physical and sexual aggression from the text, as well as the readers' responses to it. Attempts are made to understand whether the participants have identified the specific instance as aggression and to what extent.

The one-way ANOVA test results (**Table 1**) suggests that the participants' perceived intensity of the three types of aggression was significantly different. Pots-Hoc test was carried out to see the specific differences among the types of aggression (**Table 2**)

TABLE 2 | Post-Hoc test showing the difference among physical aggression, verbal aggression, and sexual aggression.

	Type of aggression	N	Subset for alpha = 0.05		
			1	2	3
Duncan[a]	Verbal aggression	145	25.6690		
	Sexual aggression	145		28.1379	
	Physical aggression	145			31.9034
	Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.
[a]*Uses harmonic mean sample size = 145.000.*

TABLE 1 | Comparison of the mean scores of physical aggression, verbal aggression, and sexual aggression.

		Sum of squares	df	Mean square	F	Sig.
Type of aggression	Between groups	2,858.611	2	1,429.306	22.256	0.000
	Within groups	27,744.000	432	64.222		
	Total	30,602.611	434			

TABLE 3 | Comparison of the mean scores of group 1, group 2, and group 3 on physical aggression, verbal aggression, and sexual aggression.

		Sum of squares	Df	Mean square	F	Sig.
Physical aggression	Between groups	70.714	2	35.357	0.739	0.480
	Within groups	6,795.935	142	47.859		
	Total	6,866.648	144			
Verbal aggression	Between groups	635.627	2	317.813	6.743	0.002
	Within groups	6,692.484	142	47.130		
	Total	7,328.110	144			
Sexual aggression	Between groups	58.472	2	29.236	0.308	0.736
	Within groups	13,490.769	142	95.005		
	Total	13,549.241	144			
Total aggression	Between groups	1,622.126	2	811.063	2.034	0.135
	Within groups	56,609.708	142	398.660		
	Total	58,231.834	144			

which indicates that all three categories of aggression differ significantly to each other. Verbal aggression was given the lowest score, sexual aggression obtained scores significantly higher than verbal aggression, and physical aggression had received the highest score.

The mean scores of three kinds of aggression indicate that individuals have perceived verbal aggression as less intense, and obviously less harmful, in comparison with physical aggression and sexual aggression. It is significant to note that the consequences of different forms of aggression were given little importance or the psychological consequences were given lesser importance than the physical and tangible consequences of aggression. Considering the culturally ingrained attitudes about aggression, particularly the belief that women who attempt to break the cultural norms deserve punishments in the form of aggression (Stephens and Eaton, 2020), the non-significant involvement of socio-demographic characteristics worth mentioning here, including gender. It indicates that both men and women support the suppression of women through various means and justify aggression against them, especially if it is not physical.

The select life writings, Jaishree Misra's "Ancient Promises" and Meena Kandasamy's "When I Hit You: The Portrait of the Writer as a Young Wife", considered as semi biographical, brings to light several instances of domestic abuse. The books depict aggression of various types encountered by the protagonists. The text, thus, could be considered as a reflection of the aggression prevalent in the society and hence important documents to the study of aggression. As Coyne et al. (2011) argues, "though violence in media has been widely studied, there is a dearth in the study on aggression pervasive in books and its subsequent effect on the readers, despite its popularity." Life writings not only reflect the societal attitudes and perceptions about aggression, but also likely to influence the readers by either promoting or questioning those attitudes.

Results represented by **Table 3** reveals that based on the order of presentation, individuals had responded differently to aggressive instances. Specifically, as the result indicate, group 1, group 2, and group 3 differ significantly based in their scores on Verbal Aggression. Post-Hoc analysis was carried out to estimate the exact difference. Post-Hoc results (**Table 4**) indicate that Group II where the participants were exposed to the mildly described instances first, has perceived the instances as more aggressive compared to the other two groups.

TABLE 4 | Post-Hoc test showing significant difference among group 1, group 2, and group 3 on basis of verbal aggression.

	Group	N	Subset for alpha = 0.05	
			1	2
Duncan[a]	Group 1	44	22.8182	
	Group 3	16	24.3750	
	Group 2	85		27.3882
	Sig.		0.374	0.087

Means for groups in homogeneous subsets are displayed.
[a]*Uses harmonic mean sample size = 30.930.*

The results signify the effect of priming observable through the significant difference among the responses of the individuals based on the order of presenting instances of different kinds of aggression. When the mildly or implicitly aggressive instances were presented first, participants perceived it as more intensely aggressive compared to the participants who had exposed to the explicitly aggressive instances first or a combination of both. This result emphasizes that comparing one's personal experiences of verbal aggression with more explicit instances, or other forms of aggression, can make an individual believe that their situation is comparatively better than others. This trivialization of verbal aggression would promote tolerance of aggression that might encourage the perpetrators to become more intensely and frequently aggressive. It is important to note here that the same trend is not visible for physical aggression and sexual aggression where the aggressive behaviour is overt and the outcomes often more explicit. It need more elaborate researches to understand the exact role of priming and the involvement of any other variables in the trivialization of aggression.

In many different patriarchal societies and families, there is a general tendency to trivialize and normalize aggression against women within family, particularly among couples (Wood, 2001; Namy et al., 2017; Rodelli et al., 2022). Furthermore, the current

study highlights the possibility of verbal aggression getting much more trivialized when there are comparative information about physical and sexual aggression. If reading about other forms of aggression, with or without personal experience, can depreciate verbal aggression, exposure to social media violence with vivid multisensory experiences can have tremendous undesirable consequences. Papp et al. (2022) report the association between media exposure and acceptance of patriarchal norm as well as sexualized aggression among women. Repeated exposure to media violence result in cognitive and emotional habituation and subsequent normalization of aggressive behaviours (Piotrowski and Fikkers, 2019). Further empirical studies are required to see if these normalization also include trivialization of verbal aggression. Nevertheless, trivialization of verbal aggression over physical aggression can result in serious psychological harm considering the potential impact of verbal aggression within families (Aloia, 2022). The current study advocates development of socio-psychological interventions and modifications in social policies to reduce trivialization of verbal aggression that pose a serious threat if unaddressed.

Limitations and Further Directions

Current study is a preliminary exploration that may not be a true representation of the population, especially due to the sampling technique adopted. Also, the reasons and consequences of trivialization of aggression against women are also not identifiable from the current study. Again, the study does not clarify whether verbal and sexual aggression were considered by the participants as a form of domestic abuse. A qualitative or mixed research would answer these questions. Despite, it provides a general impression about the attitude of the society toward aggression against women that also corroborate with the life writings of the select authors. It is recommended to carry out further large-scale empirical researches to identify the reasons, extent, and impact of trivialized verbal aggression in familial contexts.

CONCLUSION

Aggression against women is often trivialized in India, as it is evident from the current study results. Especially verbal aggression is considered as less intense with minor or negligible consequences. When tolerated, if verbal aggression will be considered as an approval that makes the perpetrator continue with similar or more intense forms of aggression is a question raised from the current findings. Similarly, whether the consequences of verbal, physical, and sexual forms of aggression can be equally harmful that destroy the healthy functioning of an individual also needs to be studied. In short, the current study results urge the need for early interventions to identify and control aggression of all kinds. Further, it demands attention from the academia, policy makers, women's right activists, and the public to be aware of the consequences of all kinds of aggression including its various verbal forms. Also, the study signifies the imperative need of future studies to explore the exact impacts of verbal aggression on well-being, productivity, and health outcomes.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

SA did the conceptualization, prepared the materials for data collection, carried out the qualitative textual analysis, and contributed in the data collection and writing the manuscript. AG prepared the research design and done the quantitiave analysis and contributed in data collection and the writing of the manuscript. Both authors contributed to the article and approved the submitted version.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.923753/full#supplementary-material

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Conceptualising the separation from an abusive partner as a multifactorial, non-linear, dynamic process: A parallel with Newton's laws of motion

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The present study focused on the dynamics and factors underpinning domestic abuse (DA) survivors' decisions to end the abusive relationship. The experiences and opinions of 12 female DA survivors and 18 support workers were examined through in-depth, one-to-one, semi-structured interviews. Hybrid thematic analysis was conducted to retrieve semantic themes and explore relationships among the themes identified and the differences in survivors' and professionals' narratives of the separation process. The findings highlighted that separation decisions derived from the joint action of two sets of factors, the "promoters" and the "accelerators." Whilst the "promoters" are factors leading to the separation from the abuser over time, the "accelerators" bear a stronger and more direct connection with survivors' decision to end the abusive relationship. Despite their differences, both these factors acted as propelling forces, leading survivors to actively pursue the separation from the perpetrator. To portray the dynamic links among these factors, we propose a conceptualisation drawn from Newton's laws of motion. Our findings also highlighted important differences in the views of survivors and support workers, as the former conceived themselves as proactive in ending the abuse, whereas the latter described the leaving process as mainly led by authorities and services supporting survivors. This study has potential implications for research, policy and clinical practice, as it suggests that far from being a linear sequence of multiple stages, leaving an abusive relationship results from a complex interplay of factors that facilitate ("promoters") or drastically accelerate ("accelerators") the separation process. We argue that future research should aim at improving our current understanding of the subjective and situational factors that can act as "accelerators" or "promoters" for women's leaving decisions. Moreover, clinicians and policymakers should invest in creating interventions that aid victims to recognise and leverage promoters and accelerators, thus increasing their readiness to end the abuse.

KEYWORDS

domestic violence, separation, leaving an abusive partner, Stages of Change, turning points, professionals supporting victims, post-traumatic growth

Introduction

According to the latest definition of domestic abuse (DA) proposed in the Domestic Abuse Act 2021 (Home Office, 2021), DA can be considered as any abusive behaviour occurring between two people aged 16 or over and personally connected to each other[1]. This definition encompasses different types of DA (physical and sexual abuse, threats, coercion, control, psychological, emotional, and financial abuse) and defines as "abusive" behaviours that may be directed at the victim and/or or perpetrated against third parties (e.g., children) connected to this latter. This definition aims at capturing the complexity of an issue that is still considered as a "global pandemic" (Wilcox et al., 2021, p. 701) and primarily affects women and girls, as a third of women worldwide have experienced DA in their lifetime. Additionally, it has been estimated that in 2020, a woman was killed by a family member every 11 min (United Nations Office on Drugs and Crime [UNODC], 2021; World Health Organization [WHO], 2021). Ending an abusive relationship remains a complex and lengthy process that seldom follows a linear timeline, as it often entails temporary breakups and episodes of reconciliation before the final separation (Anderson and Saunders, 2003; Enander and Holmberg, 2008). Moreover, achieving the separation does not imply the end of the abuse, as DA can continue and even intensify following the decision to leave (Humphreys and Thiara, 2003; Ornstein and Rickne, 2013; Zeoli et al., 2013; Hayes, 2015), often increasing victims'[2] risk of being seriously injured or killed by their ex-partner (Campbell et al., 2003; Garcia et al., 2007; Spencer and Stith, 2020). Over the past few decades, research on survivors' decisions to stay or leave had two main foci. The first addressed the determinants of the separation process, i.e., the pivotal *factors* playing a role in survivors' decision to stay, leave and return to the abuser. In this domain are situated studies (e.g., Griffing et al., 2002; Anderson and Saunders, 2003; Koepsell et al., 2006; Kim and Gray, 2008; Sichimba et al., 2020; Heron et al., 2022) that highlighted important external, internal and relationship-related factors that may influence separation decisions. The second focus of DA research concerned the *process* of leaving an abusive partner, which has primarily been conceptualised as a gradual progression through multiple stages or as the product of sudden, decisive changes ("turning points"). The following sections will present a synopsis of the key findings related to these two research traditions.

Factors influencing the separation

External factors

Numerous studies have shown that having limited resources for economic independence can delay the separation process (Burns, 2005; Kim and Gray, 2008), whilst a situation of economic stability can facilitate it (Rhatigan et al., 2006; Clough et al., 2014). In the post-separation stage, financial difficulties can also lead to issues in finding accommodation and stable housing solutions, which in turn might promote the return to the abuser (Griffing et al., 2002; Ponic et al., 2011; Sanders, 2014). The type and quality of the support received from formal and informal sources of help, both during and after the separation, has also been identified as a relevant factor in stay/leave decisions (Taket et al., 2014; Ekström, 2015; Oyewuwo-Gassikia, 2020; Notko et al., 2022). More specifically, informal sources of support, such as friends and family members, can promote victims' decision to leave by offering a place to stay and emotional support. Moreover, they might play an active role in encouraging survivors to adopt measures aimed at protecting them from post-separation abuse, such as pressing charges against the perpetrator (Prosman et al., 2014). However, DA literature indicated that victims who make multiple attempts to leave might experience a gradual decrease in the support received from their loved ones, and friends and family members might also withdraw from the victim if they fear the perpetrator's retaliation (Goodkind et al., 2003; Trotter and Allen, 2009). Similarly, survivors' experiences of formal support received by professionals, authorities and organisations can have mixed effects on their decision to leave and maintain the separation. Research shows that victims seek different types of formal help from services and professionals, including but not limited to counsellors, support groups, helplines, family doctors, police, and social services (Barrett and Pierre, 2011; Rizo and Macy, 2011; Hegarty et al., 2013; Ford-Gilboe et al., 2015). However, the support received from these sources might not be adequate, thereby delaying the separation process or leading victims to return to their ex-partner. For example, survivors' perceptions of police support can play a role in their

1 Although multiple terms (e.g., gender-based violence, intimate partner abuse) are commonly used to refer to domestic violence, the term "DA" will be used throughout the current paper to refer to abuse (in any form) perpetrated by an intimate partner. This term was chosen to be consistent with the United Kingdom cross-government definition of intimate partner abuse as "DA," as the study this paper refers to was conducted in the United Kingdom.

2 Throughout this paper, both terms "survivors" and "victims" will be used interchangeably. Some evidence suggests that the term "victim" might be associated with conceiving the victimised individual as weak and disempowered (Donovan and Hester, 2010; Murray and Graves, 2013). In contrast, the term "survivor" is often associated with resilience and personal transformation, sometimes even resulting in triumphalist attitudes exalting the concepts of strength and survivorship (Coreil et al., 2012; Dyer, 2015). Despite these semantic differences, people who have experienced DA may define themselves as victims, survivors, both or neither (Hockett et al., 2014; Hockett and Saucier, 2015). Furthermore, these identity aspects can fluctuate depending on personal preferences, contexts and situations (e.g., "victim" in formal circumstances but "survivor" in interpersonal situations; Hockett et al., 2014; Hockett and Saucier, 2015). Therefore, using both terms symbolises the intention to acknowledge both sides (victimisation and survivorship) of DA survivors' experiences to recognise their complexity and avoid simplistic and unilateral definitions.

decision to stay or leave (Johnson, 2007; Nnawulezi et al., 2021; Couture-Carron et al., 2022). Moreover, professionals (e.g., psychologists, gynaecologists, and general practitioners) might hold stigmatising attitudes toward DA victims (Garimella et al., 2000; Peltzer et al., 2003; Baraldi et al., 2013). This may, in turn, negatively influence survivors' perception of services (Paranjape et al., 2007; Robinson and Spilsbury, 2008; Ragusa, 2013) and enhance feelings of helplessness, isolation and vulnerability (Macy et al., 2005). Lastly, cultural and religious norms are also widely recognised as significant factors in stay/leave decisions, with multiple studies indicating that cultural and religious norms might make it harder for victims to disclose the abuse, seek help and ultimately end the abuse (Bell and Mattis, 2000; Kyriakakis, 2014; Sabri et al., 2018; Dery et al., 2022; Li et al., 2022). Conversely, however, local stakeholders (e.g., religious representatives and community members) might also provide valuable support to victims, allowing them to disclose the abuse and offering guidance during the separation process (Pyles, 2007; Shalabi et al., 2015; Sabri et al., 2018).

Internal (personal) factors

Lack of acknowledgement of the abuse and use of defence mechanisms

A set of personal factors (deep-rooted in survivors' cognitive-affective appraisal of the abuse) has also been indicated as relevant in staying/leaving decisions. For example, some researchers posited that DA survivors remain with the perpetrator as they fail to recognise the presence of abuse (Rakovec-Felser, 2014; Herman, 2015). Conversely, ending the violent relationship often coincides with the redefinition of their relationship as abusive (Anderson and Saunders, 2003; Edwards et al., 2012). In their study involving women previously in abusive relationships, Khaw and Hardesty (2007) described their participants' process of "realization" (p. 418), consisting of a progressive acknowledgement of the abuse experienced. In another study (Enander, 2011), women who had left their abusive partners reported that their initial view of the perpetrator as a loving partner progressively subdued in favour of gradual recognition of his abuse. The acknowledgement of the partner's duplicity (as both caring and abusive), a dichotomy described using the term "Jekyll and Hyde" (p. 36), ultimately led to their decision to leave (Enander, 2011). This evidence suggests that victims' acknowledgement of the abuse can be remarkably influential in staying/leaving decisions. However, as some authors (Enander and Holmberg, 2008) pointed out, an in-depth understanding of the abuse often occurs after the separation, thereby making it challenging to draw direct links between victims' recognition of the abuse and their decision to leave their partner. Moreover, survivors might adopt defence mechanisms operating a distortion of their reality and, therefore, hindering their ability to have a clear perception of the abuse (Burke et al., 2001; Chung, 2007). In turn, the decision to stay or leave might be influenced by these defence mechanisms, among which rationalisation and denial of the abuse appear to be particularly frequent (Busch, 2004; Whiting et al., 2012). Denial often characterises the first stages of the violent relationship, in which victims seem more likely to deny the existence of abusive behaviours (Edwards et al., 2012). In using denial, women might adopt a "persona of normality" (Francis et al., 2017, p. 2207), both as a survival strategy and to keep the violence hidden from others. As far as rationalisation is concerned, victims might, for example, rationalise their partner's controlling and coercive behaviour as a sign of love and care (Chang et al., 2006; Chung, 2007) or might believe in the "good nature" of their partner, whose violence is "unwanted" and "out of their control" (Boonzaier and de La Rey, 2003). A further expression of the attempt to rationalise the abuse may consist in the minimisation of its frequency and intensity (Logan and Walker, 2004; Whiting et al., 2012). A plethora of studies (Zink et al., 2006; Enander and Holmberg, 2008; Souto et al., 2015) offered support for the role of denial, rationalisation and minimisation in stay/leave decisions. In this regard, Brown and Muscari (2010) invited researchers and professionals supporting survivors to consider their tendency to understate the gravity of the abuse experienced. This implies the need to adopt specific measures to identify denial and minimisation of DA and accurately evaluate risk, for example, by asking victims to keep a diary of their abusive experiences (Brown and Muscari, 2010).

Cognitive appraisal of the abuse: Victims' self-blame and the learned helplessness hypothesis

In some cases, DA is perceived by survivors as provoked by their characteristics and/or actions and these self-blaming attitudes might be amplified by the abuser's tendency to blame the victim for eliciting the abuse (Reich et al., 2015; Adjei, 2018; Morrison et al., 2018). In this regard, O'Neill and Kerig's (2000) study compared a group of DA survivors still involved in abusive relationships with survivors who had left the abuser. The results indicated that women who were still involved with the perpetrator had higher scores on self-blame measures compared to survivors who had left the violent relationship. For these reasons, interventions aimed at reducing self-blame after the separation can support victims to stay free of abuse (Evans et al., 2018). Staying/leaving decisions have also been explained through the lenses of the learned helplessness hypothesis, proposed in the seventies by Seligman and colleagues (Seligman et al., 1971; Seligman, 1972, 1975; Maier et al., 1973; Rosellini and Seligman, 1975; Seligman et al., 1975). Their model postulates that when individuals learn they have little to no control over what happens to them, they gradually reduce their efforts to produce changes in their reality (Seligman et al., 1971). In line with this model, Walker (1979, 1984) suggested that women who are exposed to long-term abuse are at risk

of developing learned helplessness. This might happen, for example, if survivors develop the expectation that their partner will be abusive, regardless of their attempts to reduce conflict (Clements and Sawhney, 2000). The development of learned helplessness in DA victims might make it more challenging to end the abusive relationship (Pugh et al., 2018; Estrellado and Loh, 2019; Ali et al., 2020). In this regard, Few and Rosen (2005) outlined that victims' repeated perception of their attempts to counteract the violence as unsuccessful led them to eventually abort them. Their participants' narrations outlined a subdued attitude and an overall "habituation" to the violence, which hampered their ability to end the abusive relationship (Few and Rosen, 2005). Despite its importance, the learned helplessness hypothesis and its application to the understanding of survivors' staying/leaving processes received considerable criticism. Indeed, attributing learned helplessness to survivors implies considering them as "trapped" in the abusive relationship and passively accepting the circumstances (Dunn, 2005), i.e., a situation resembling a "psychological paralysis" (Gondolf and Fisher, 1988, p. 10). On the contrary, far from being passive, victims often plan strategies to leave and make multiple attempts to end the abusive relationship (Scheffer Lindgren and Renck, 2008; Moe, 2009; Meyer, 2012) Moreover, as Peled et al. (2000) noted, women's staying can be a deliberate choice and not necessarily a consequence of their perceived impossibility to leave.

Relationship-related factors

Violence escalation, survivors' fear, and the role of risk assessment

Violence escalation and survivors' fear of the abuse seem to have an ambivalent role in stay/leave decisions. Whilst they can be potential catalysts for leaving (Scheffer Lindgren and Renck, 2008; Bostock et al., 2009; Gharaibeh and Oweis, 2009; Estrellado and Loh, 2019), they can also delay the separation, due to victims' fear of the partner's reaction to separation attempts (Kim and Gray, 2008; Cravens et al., 2015; Ivany et al., 2018). When considering the possibility of staying, leaving or returning, victims engage in risk assessment and safety planning to predict possible dangers linked to their decisions (Connor-Smith et al., 2011; Gonzalez-Mendez and Santana-Hernandez, 2014; Wood et al., 2021a). These processes are usually mediated by formal services (Stanley and Humphreys, 2014; Robinson et al., 2018; Youngson et al., 2021), but there is increasing evidence that survivors independently engage in risk assessment and safety planning, even before seeking support against DA (Martin et al., 2000; Macy et al., 2005; Connor-Smith et al., 2011; Wood et al., 2021b). This suggests that survivors' stay/leave/return decisions are based on an evaluation of the risks they would face, although there seems to be no consensus on the accuracy of their risk assessment. Indeed, some studies suggested that survivors are usually able to predict risk levels with great precision, based on factors such as violence escalation or changes in the perpetrator's behaviour (Heckert and Gondolf, 2004; Cattaneo et al., 2007; Bell et al., 2008; Connor-Smith et al., 2011). Other authors, however, pointed out that survivors' judgement can be clouded by a variety of factors, such as optimistic bias (tendency to perceive negative events as unlikely to happen) or the presence of symptoms of mental illness and psychological distress (Harding and Helweg-Larsen, 2008; Helweg-Larsen et al., 2008; Vitek et al., 2018; Sinclair et al., 2020).

Feelings of love and attachment to the partner

Love and commitment toward the perpetrator can play a pivotal role in delaying the separation process (Truman-Schram et al., 2000; Donovan and Hester, 2010; Eckstein, 2011). Conversely, changes in romantic feelings for the perpetrator have often been connected to the decision to end the abusive relationship (Rhatigan et al., 2006; Enander and Holmberg, 2008). Nonetheless, conceptions of victims as inclined to "romanticising" their relationship (Papp et al., 2017, p. 100) fail to capture the complexity of emotional bonds in violent relationships (Fraser, 2003). Indeed, victims might be aware of the violence yet remain with the perpetrator as they feel that love and abuse are intertwined and that violence is somewhat "the harm of romantic love" (Hayes and Jeffries, 2013, p. 67). In this regard, the theory of traumatic bonding (Dutton and Painter, 1981, 1993) posits that the coexistence of the perpetrator's caring attitude and their violence cements a dysfunctional relationship between abuser and victim, from which it can be difficult to break free.

Children's safety and well-being

There is a general consensus in DA research that the presence of children represents a double-edged factor, both promoting and hindering the separation process. Indeed, the attempt to safeguard children from abuse might promote women's decision to leave (Scheffer Lindgren and Renck, 2008; Lacey et al., 2013; McDonald and Dickerson, 2013; Katerndahl et al., 2019; Heron et al., 2022). Nonetheless, fear for their children's safety during and after the separation process might lead women to stay with, or return to, the perpetrator (Levendosky and Graham-Bermann, 2001; Haight et al., 2007; Herrero-Arias et al., 2019). Also, mothers might delay the separation process to avoid leaving their children behind, as some shelters do not accept large families, adolescents or boys (Moe, 2007). Further complexity in mothers' decisions derives from the perceived stigma they might experience, regardless of whether they stay or leave. As Saunders and Oglesby (2016) pointed out, mothers who stay in violent relationships might be accused of not safeguarding their children, whilst mothers who

leave may face other types of stigma, such as being labelled as "unfit mothers" if they seek post-separation support. Lastly, the presence of children with the perpetrator and the consequent child custody rights often expose women to DA even after the separation (Humphreys and Thiara, 2003; Beeble et al., 2007; Harrison, 2008; Hayes, 2012), rendering the victims' healing process harder to achieve (Zeoli et al., 2013).

The separation process: Sequential stages or turning points?

As mentioned above, some DA studies focused specifically on the *dynamics* of the separation process. In general terms, these studies could be clustered into three different groups, depending on their conceptions of the separation process. Some studies (Frasier et al., 2001; Cluss et al., 2006; Edwards et al., 2012; Reisenhofer and Taft, 2013; Zapor et al., 2015) described the leaving process as a sequence of stages, drawing from Prochaska and DiClemente's Transtheoretical Model of Change (TTM) – often referred to as the "Stages of Change (SOC) Model" (DiClemente and Prochaska, 1982; Prochaska and DiClemente, 1982, 1983, 1986). The SOC stages encompass a continuum that goes from a stage of precontemplation (in which there is no intention to change), to action (i.e., the stage in which the desired change is implemented) and lastly, maintenance (DiClemente and Prochaska, 1982). A different definition of the separation process has been offered by studies (Chang et al., 2010; Catallo et al., 2012; Murray et al., 2015; Estrellado and Loh, 2019), conceptualising leaving decisions as a result of "turning points," i.e., events that redirect the individual's life path (Elder, 1985). Lastly, in the third group, there are studies (Chang et al., 2006; Khaw and Hardesty, 2007; Childress et al., 2021) that attempted to combine the SOC model with the concept of "turning points," to develop a more nuanced understanding of the separation process. Nevertheless, to date, there is a lack of a comprehensive understanding of the separation process and more efforts are needed to merge our knowledge of the factors (the "what") and the processes (the "how") underpinning the separation from an abusive partner. Therefore, this study aimed to contribute to bridging this gap, exploring stay/leave decisions from both a component- and a process-oriented perspective. Furthermore, the vast majority of studies (e.g., Baly, 2010; Bowstead, 2015; Crossman et al., 2016; Khoury and Wehbi, 2016) investigated the leaving process only from survivors' perspective, whilst valuable insights may derive from professionals supporting victims during the transition to an abuse-free life. Therefore, the current study aimed to explore the separation journey as portrayed in the accounts of both DA survivors and support workers. In particular, these professionals have been chosen as they have direct contact with survivors in the various health and social care settings they work in Bourassa et al. (2008), Heffernan et al. (2012), Lessard et al. (2014), and therefore, are likely to have first-hand knowledge of the separation dynamics.

Materials and methods

Participants and recruitment

The recruitment for the current study was conducted in two stages. The first stage included 12 participants aged 26–67 (M = 44.4), all females. All were mothers except one, and 9 out of 11 mothers had children with the abusive partner they separated from, with the remaining two having children from previous relationships. The majority of the survivors identified as White British (7; 58.3%), with two Asian (16.6%), one Black Caribbean (8.3%), and two survivors who described their ethnicity as mixed (16.6%). They were recruited *via* a United Kingdom-based DA charity providing a range of services to DA victims, including but not limited to counselling, housing advice and organisation of social groups and events for survivors. After obtaining authorisation from the charity manager, the Principal Investigator (DDB) conducted recruitment *via* several visits to the service over a period of 5 months, during which potential participants (service users) were approached and information about the study was provided. Following guidelines on recruitment of vulnerable participants (Shedlin et al., 2011; Sutherland and Fantasia, 2012; Ellard-Gray et al., 2015), this initial period of engagement with service users allowed the building of rapport, for example, by creating opportunities to discuss the study in lay terms (e.g., referring to the interviews as "conversations"). To be involved in the study, participants had to be women, aged 20 years–old or older and have a history of being in an abusive relationship for at least six consecutive months, but not being in an abusive relationship at the time of the interview. This latter criterion was motivated by the nature of the study, as its primary focus was the separation process. Further information on the characteristics of the sample recruited in stage I is reported in **Table 1**.

The second stage of the study was conducted with the participation of 18 support workers. In the United Kingdom, "support worker" is a broad term describing anyone "employed to foster independence and provide assistance in areas such as communication, employment, social participation and who may take on tasks in respect of advocacy, personal care and learning" (Manthorpe and Martineau, 2008; p. 7). In the context of DA, this definition includes professional figures such as independent domestic violence advisors, outreach and refuge support workers. The support workers involved in this study were all women aged 24–67 (M = 41.1). Most of them identified as White (British [13; 72.2%] and White other [1; 5.5%]), followed by Asian (3; 16.6%) and mixed/multiple ethnic groups (1; 5.5%). Overall, both samples reflected national figures on the different ethnic groups populating

TABLE 1 Characteristics of the stage I sample (DVA survivors).

Participant	Age at the time of the interview	Duration of the abusive bond (years)	Average time passed since the final separation from the perpetrator (years)	Other abusive relationships prior to the last one
1	40	20	4	No
2	46	7	2 weeks	Yes (one other partner)
3	42	11	1	No
4	51	19	2	No
5	26	1	4	No
6	55	4	24	Yes. Her father was abusive toward her and her mother
7	67	23	25	Yes (one other partner)
8	48	14	14	No
9	36	8	4	No
10	39	22	3	No
11	35	6	10	No
12	48	2	2	Yes (one other partner)

England and Wales, with most recent data confirming a substantially stable prevalence of people identifying as White, followed by Asian/Asian British, Black/Black British, and mixed/multiple ethnic groups (Office for National Statistics [ONS], 2019). The support workers interviewed were employed in different charities and organisations supporting DA victims located in Northwest England and West Midlands. At the time of the study, they had been in the role of support workers from a minimum of 2 years to a maximum of 10. To be included in the study, they had to be 18 years old or over and in a support worker role for more than 6 months prior to the interview. The current study included only support workers with relevant experience in helping DA victims pre– and post-separation. Support workers without such experiences (e.g., whose role was to provide brief advice through DA helplines) were not invited to participate. These criteria were included in the email sent to the managers of the organisations and charities contacted, so that only the support workers meeting the study inclusion and exclusion criteria were invited to participate in the study.

Procedures

The data were collected in both stages of the study using face-to-face, semi-structured interviews. Before agreeing to the interview, participants in both stages read a detailed Information Sheet (which was provided in paper form in stage I and *via* email in stage II) and signed an Informed Consent Form. All participants were offered the opportunity to ask questions about the study by contacting the PI *via* email before deciding whether to take part and they were informed of their rights to withdraw from the study and to withdraw their consent to the use of their data before the stage of data analysis. The interviews were conducted in English, audio-recorded on a digital voice recorder and transcribed verbatim by the first author, who listened to each interview recording multiple times to check the accuracy of transcription. The interviews lasted from 1.5 to 2.5 h and participants received no compensation for participation. After the interviews, both survivors and support workers were provided with a paper copy of a debrief sheet containing information on how to get further psychological support, in case they experienced any psychological distress during or after the interview. Additionally, stage I interviews were conducted on the premises of the DA charity the survivors were recruited from to ensure that support was readily available if needed. According to the criterion of data saturation (Faulkner and Trotter, 2017) recruitment continued until no new themes emerged and the existing ones were saturated. More specifically, in line with the principles proposed by Francis et al. (2010), a minimum sample size for initial analysis (10 participants for each stage of the study) was set. Although there are no standardised guidelines for selecting a suitable sample in qualitative research (Baker and Edwards, 2012; Vasileiou et al., 2018), there is consensus that when deciding on sample size, qualitative researchers should refer to studies that used the same research design and wherein data saturation was achieved (Onwuegbuzie and Leech, 2007). Despite the paucity of studies on DA involving both professionals and survivors, some of them (e.g., Rose et al., 2011; Trevillion et al., 2012; Bradbury-Jones et al., 2014; Francis et al., 2017) served as relevant guidance to set a minimum sample size. Additionally, a stopping criterion was decided upon, i.e., the number of interviews to be conducted "without new shared themes or ideas emerging, before the research team can conclude that data saturation has been achieved" (Francis et al., 2010; p. 1234). Following these principles, data collection ended when the minimum sample size was obtained and saturation

was achieved. The study was granted ethical approval by the Ethics Committee of the Manchester Metropolitan University (reference number IDS PGR 14/5–1) and ethical principles related to the protection of participants and their data (including preserving survivors' anonymity and the confidentiality of their data) were followed throughout the study.

Analysis

The transcripts were analysed using Thematic Analysis (TA) following the guidelines described by Braun and Clarke (2006, 2012). In stage I, inductive analysis was performed by the first author, who coded interview transcripts by hand, and the research team jointly discussed the developing themes; any discrepancies were assessed and negotiated until there was agreement on the final themes. In stage II, the transcripts were analysed with a hybrid approach comprising both inductive and deductive TA, in line with evidence (Fereday and Muir-Cochrane, 2006; Joffe, 2012; Xu and Zammit, 2020) indicating that hybrid TA allows to give meaning to raw data using pre-existing categories, whilst still granting a comprehensive, data-driven exploration of participants' subjective experiences. Deductive TA was initially used by referring to a "codebook" of themes identified in the survivors' accounts, which served as a general interpretative framework to orientate the analysis process. This allowed for the appreciation of similarities and differences in the way both groups described the separation process and stay/leave decisions. Subsequently, the support workers' accounts were analysed further using inductive TA, to capture concepts and nuances that may not have emerged in the survivors' narratives. As a result, the initial themes and sub-themes were modified and enriched to portray the multiple voices of participants and their views and experiences of the separation process. The hybrid approach to TA utilised in stage II was facilitated by the use of the computer-assisted qualitative data analysis software (CAQDAS) NVivo (version 11). Digital copies of the transcripts were uploaded on NVivo, and themes were applied ("nodes" on NVivo) so that each node contained all the codes semantically related to it. A reflexive approach was adopted throughout the analysis. The need to be reflexive for qualitative researchers using CAQDAS implies being aware of the potential influence that the software used could have on the ways data are handled (Woods et al., 2016). In order to be reflexive, the nodes (themes) created on NVivo were regularly checked for accuracy, consistency and representativeness. Moreover, they were iteratively revised as a result of inductive TA, which modified the initial themes applied. In both stages of analysis, all transcripts, reflexive accounts of data interpretations, field notes and developing conceptualisations of codes and themes were maintained throughout to ensure reliability and provide a clear audit trail from raw data to interpreted results (Shaw, 2010; Nowell et al., 2017). The analytic process yielded four over-arching themes, each related to different aspects of stay/leave/return decisions ("*staying: the habituation to the abusive reality*," "*leaving: swinging before the jump*," "*returning: the interplay of feelings and necessity*," and "*preventing the return: rebuilding the self*"). Each overarching theme encompassed multiple sub-themes that reflected the views, opinions and experiences of survivors and professionals. The current work will solely focus on the overarching theme related to the separation process and its related subthemes, which are described below and illustrated with exemplary quotations.

Results

The dynamic forces underpinning the separation: "Promoters" and "accelerators"

The separation process emerged as facilitated by two types of factors: "the promoters" and the "accelerators." The former acted over a longer timeframe (e.g., months or years), leading survivors to gradually consider the possibility of ending the abusive relationship. However, the "promoters" did not seem to have a direct connection with the decision to leave the perpetrator. This final step appeared to be more directly linked to the second order of factors, "the accelerators," which were described by survivors and support workers as the triggering factors leading survivors to take action to end the abuse. In all the participants' narratives, "promoters" and "accelerators" were defined either as subjective factors (e.g., victims' feelings of fear) or as situations and events (e.g., particularly violent DA episodes).

"Promoters"

Increased awareness of the dynamics of the abuse

The survivors' desire to end the abusive relationship was elicited and intensified by the maturation of a deeper understanding of the abuse they experienced. For example, survivor three explained that when her medication was reduced, her overall awareness increased, enabling her to recognise that her partner's behaviour could be framed as abusive.

> *S: I was more conscious, and I was more. . . aware of what was going on around me, and. . . I–I knew what was. . . right and what was wrong, and. . . that what he was doing wasn't. . . he–he didn't love me, it–it was just –he just wanted to control me*. S3, p. 24, ll. 525–529.

The support workers also acknowledged the importance of victims' awareness and understanding

of the abusive dynamics in promoting the separation. Many of them described their efforts to promote victims' consciousness of the abuse, for example, by questioning their "justifications" for it.

> *SW: Women will kind of say: "Well, it's not his fault, because of this, this and this." And then I would say: "Well, okay. So how does he 'function' then?"(. . .)Because if he was like that with everybody, there'd be no function, and he wouldn't be able to work (. . .).* SW11, p. 2, ll. 38–45.

However, with few exceptions, the support workers highlighted that survivors seldom develop an awareness of the abusive dynamics without the help of formal services. DA survivors were described as frequently unaware of the abuse or inclined to minimise or deny it. On this aspect, survivors' and support workers' accounts diverged. For survivors, the acknowledgement of the abuse was a gradual process stemming from their reflections on their partner's behaviour. For support workers, the survivors' increased awareness was primarily an outcome of the professional support they received from different services.

Formal and informal sources of external support

Survivors seldom disclosed the abuse to others while it was happening, and thus, only a few of them identified comments and suggestions from family and friends as a factor that promoted their decision to leave. Similarly, only a few support workers mentioned that informal sources of support, such as friends or neighbours, can act as "promoters" of survivors' decisions to leave. Among them, though, support worker three mentioned that neighbours could play an important role in enabling survivors to consider leaving.

> *SW: She might disclose to a neighbour and then obviously the neighbour then, you know, feels that they may have to protect her and become, you know, a little bit closer* SW3, p. 3, ll. 62–64.

Different formal sources of support (e.g., police and DA organisations) were mentioned in both survivors' and support workers' narrations. However, the majority of the survivors interviewed reported having accessed these sources only after the separation. Thus, the formal support they received did not emerge as a strong promoter of the decision to leave. Conversely, for support workers, formal support (particularly if provided by DA organisations) was described as highly relevant in promoting leaving decisions. This is evident in the following excerpt from support worker three's interview.

> *SW: My job is to get them rehoused, my job is to find accommodation, so a lot of the women [who] have now left this- you know, have left the relationship, would still be there if I– if we hadn't managed to get accommodation for them. So, I think it's a massive key- key role in it.* SW3, p. 38–39, ll. 1018–1023.

Escalation of the abuse

The escalation of the abuse was a crucial promoter of the decision to leave the perpetrator, as survivor six highlighted:

> *S: I thought– I–I've sort of analysed it and thought: "Each attack has got worse, first it was a slap, then it was a push up the wall, then it was ramming your head up the wall, then it was. . . a punch in the face and a black eye, then he's finally getting on top of you and holding his hand over your mouth like he wanted me to die."* S6, p. 22, ll. 496–502.

It is worth noticing the "slow rhythm" that characterises the factors labelled as "promoters." In this excerpt, survivor six described a gradual crescendo of the violence, which eventually led her to end the abusive relationship. The support workers also considered the increasing intensity of the abuse or new emerging forms of DA to be factors that can slowly pave the way for leaving.

> *SW: A lot of women will say to me, "Oh he's never hit me." You know, "He's never hit me, but he now controls the money. Whereas before, he used to just shout and swear, now he controls my money, now it's–," so I think as things get worse, this– you know they start comp– a–all I mean, not everybody. But over time, um, I think they kind of look like sort of like in hindsight– think, "Well he didn't use to do this."* SW12, p. 1, 12–19.

Increase in survivors' independence and self-confidence

Some events (e.g., a brief separation from the abuser) appeared to be beneficial for survivors' sense of independence and self-confidence and therefore, ultimately encouraged some of them to leave. For example, during a period away from her partner, survivor two reported becoming more aware of her ability to take care of herself and this facilitated her subsequent decision to leave.

> *S: I sat there and I just thought: "How can I– (pause). . . Can I–can I be financially independent of him"? And rather than being scared of it, I embraced it; and I just thought. . .(. . .) I'm gonna do this, I'm gonna. . . I'm gonna –I'm going to be financially independent of him, I will.* S2, p. 82, ll. 1764–1770.

The support workers also considered increased confidence and independence to be important promoters of the separation and highlighted how they could stem from different aspects of the survivors' lives, such as returning to work.

> *SW: And they start to return to work after children have gone to school and things– (. . .) and they get a bit of independence, and that can be a factor*. SW5, pp. 1–2, ll. 21–25.

However, for most of the support workers, this increase in self-confidence was connected to the support survivors received from DA services. Therefore, rather than seeing self-confidence and increased independence as deriving from survivors' efforts to emancipate themselves, they described these dimensions as a byproduct of the help received by DA professionals and organisations.

Desire to protect children from the effects of domestic abuse and the intergenerational transmission of violence

For DA survivors, another relevant promoter of the separation was the desire to protect their children from the physical and psychological consequences of being involved and/or witnessing the abuse. Interestingly, almost all survivors who were mothers reported that an important promoter for leaving was the risk of intergenerational transmission of violence (IGT), which may have affected their children if they had remained in the abusive household. For example, survivor nine explained that she wanted to protect her daughters from the possibility of internalising dysfunctional models of intimate relationships, in which DA is considered as acceptable.

> *S: (. . .) because my. . . two daughters, the older ones. . . (. . .) were coming like in teenage years, and I just thought: "It's–. . . They're seeing things and hearing things that they don't need to see and hear," and I don't –I didn't want it to affect their lifestyle growing up*. S9, p. 53, ll. 1132–1137.

A similar account was offered by one of the support workers:

> SW: *(. . .) and [they] then decide to protect the children when they witness, um, you know- older girls witnessing what dad's like for example (. . .) Don't want them growing up thinking this is the way that she should be treated when she is in a relationship um–you know- "This is not normal, I don't want them thinking this is a normal situation" (. . .) Or boys mimicking what dad does*. SW4, p. 24, ll. 549–558.

Additionally, survivors and support workers mentioned that an important promoter for leaving is connected to mothers' increased awareness of the detrimental cognitive, emotional and behavioural effects of DA exposure on their children. For example, a support worker mentioned that some mothers consider leaving when they start noticing issues in their children that are linked to their ongoing exposure to DA.

> *SW: (. . .) [it's] noticing the effect that it's having on the children whether it's, you know, poor performance in education or children mirroring behaviours (. . .) of a partner or regressing, things like bedwetting or things like that*. SW16, p. 2, ll. 25–30.

Another support worker remarked on the importance of this promoter by saying that, at times, the effect of DA on children represents the primary motivation that leads survivors to consider leaving the abusive relationship.

> *SW*: P: *So, um, I've had a lot of survivors who will constantly say that they– that they know they're in an abusive relationship, but they don't want to do anything about it and they're happy, and then when it's pointed out to them, the effect it's having on the children, I think that's when they start– it sort of triggers, um, "It's not just affecting me now, it's affecting them."* SW6, p. 1, ll. 9–15.

"Accelerators"

The term "accelerator" was chosen to indicate factors that were mentioned by both survivors and support workers as directly related to the separation. The accelerators are particularly intense subjective and/or situational factors that act as triggers for the leaving process as they create an insoluble rupture in the balance of the abusive relationship, thus priming the process of leaving the perpetrator.

Particularly violent domestic abuse episode

More than half of the survivors interviewed reported that a particularly violent DA episode acted as a trigger for leaving the abuser. For example, survivor two had left her partner and returned to him several times until a particularly intense episode of abuse occurred, which led her to leave him permanently.

> *S: And then he pushed me down the stairs (. . .) and that. . . was the final straw [voice broken from crying]*. S2, pp. 77–78, ll. 1665–1667.

Similarly, in the support workers' accounts, a severe episode of abuse could accelerate the leaving process. Support

worker three reported an example from one of her client's experiences:

> SW: *But this one particular occasion, he beat her up that bad with a hammer um, she miscarried, uhmmm, so that was her, you know, ch– that was her trigger*. SW3, p. 37, ll. 967–969.

Perception of the abuse as unbearable

The feeling that the abuse had become intolerable led some of the survivors to end the abusive relationship. For example, survivor eight reported the sense of being exasperated by the abuse she was experiencing. The impossibility to tolerate the violence (*I couldn't bear it any longer*, S8, p. 19, l. 414) led her to tell the abuser that she *had enough*, p. 21, ll. 461–462 of his abuse and wanted to end their relationship. To describe her inability to tolerate the abuse any further and the state of profound prostration she was experiencing, survivor six used the word "breakdown"; *I came close to a breakdown (. . .) to be honest with you*, S6, p. 26, ll. 581–582. Some support workers also reported that survivors might leave when they start perceiving the abuse as unbearable. For some of the women interviewed (survivors and support workers), the perception of the abuse as unbearable was linked to an escalation of the violence. However, in some cases, no noticeable changes in the abuse motivated survivors' feeling that the violence had become intolerable. In these cases, this perception was described as deriving from "internal changes," for example, a protracted state of emotional exhaustion. In this regard, a support worker reported: SW: *They feel that they're at the bottom anyway, there's nothing for them (. . .). The–they're finished, they can know they've got nothing, they are. . . exhausted (. . .) They are wiped out, they are finished*. SW1, p. 53, ll. 1186–1192.

Fear for their life and safety

Survivors often reported having experienced intense abuse and life threats several times before the emergence of fear. In some way, the abuse had become an integral component of their relationship, and therefore, some of them did not feel their life could have been in danger. Nevertheless, sudden changes in the partner's abuse (e.g., the onset of new forms of abuse) could worsen survivors' fear for their safety and thus accelerate the separation. For example, survivor eleven narrated an episode in which her partner threatened to kill her, which immediately triggered the leaving process.

> *S: He–he went to bed and then he says: "When I get up" – he says –"You've had it this time" –he says– "I'm deadly serious" –he says– "I'm gonna kill you." So when he was in bed (pause). . . –I kept checking to see–you know– up the stairs, if I could hear anything (. . .) I just grabbed my clothes, grabbed my post office book (. . .) with a bit of money in, and just ran.* S11, pp. 6–7, ll. 127–137.

The support workers' narrations were in line with the survivors' accounts in highlighting the role of fear as an accelerator for the separation, which usually occurs soon after the realisation that their life may be in danger.

> *SW: Within their heads, but they just suddenly thought, "I can't live with this guy anymore. He is going to kill me."* SW6, p. 15, ll. 363–364.

Fear for children's life and safety

Both survivors and support workers assigned a salient role in triggering the separation to the realisation that the abuser may seriously hurt and/or kill the survivor's children. This accelerator was inherently different from the promoter described above ("desire to protect children from the effects of DA and the Intergenerational Transmission of Violence"). Indeed, mothers' fear for their children's life was a far more powerful motivator for leaving, one that often had a direct and identifiable link with the separation, as explained by survivors five and six.

> *S: He. . . picked up a bottle ermm. . . (. . .) and he threw it. . . aiming for my son, but he missed him and hit the wall behind us. But. . . because he'd done that, ermm. . . to try and stop him from crying. . . that -obviously in my mind I thought: "I just can't do that anymore."* S5, p. 5, ll. 94–102.

> *S: I thought. . . it all flashed in my head, I thought: "If he did what he did to me, a grown adult, what the hell could he do to a baby?" And I thought: "Ooooh!' I felt panic" (. . .) And I thought: "You are not going to do anything to my child" (. . .) And I thought: "That's it! I'm gonna stop you and save the child as well," and I did.* S6, pp. 35–36, ll. 802–809.

Support workers also reported mothers' concerns for their children's safety as an important factor triggering and/or accelerating the separation process. As support worker three explained:

> *SW: It might be (. . .)[that] he's hurt – he's hurt one of the children, that might be the trigger*. SW3, p. 33, ll. 885–886.

"This isn't love": Changes in the romantic attachment for the perpetrator

An interesting finding from the data was that not all accelerators were directly connected to the abuse. For example, realising that the perpetrator lacked genuine romantic feelings was also a factor related to the survivors' decision to end the abusive relationship. In the experience of survivor six, understanding that her partner did not feel affection for her and her newborn son represented a pivotal accelerator for the final separation.

> *S: And I thought: "He hates us! That's not love"(. . .) And that was it (. . .) I thought: "This isn't love."* S6, p. 35, ll. 796–801.

Pressure to leave from services and authorities

This accelerator only emerged in the support workers' narrations but was the most frequently mentioned. Survivors were often described as leaving their partner due to the pressure of formal sources of support, particularly in situations in which children might be removed from their custody if they remain with the perpetrator. Support worker five described this aspect as follows:

> *SW: I think social care getting involved also is a big thing (. . .) If– or other services starting to get involved can (. . .) trigger things. Sometimes that pushes them so that can be the final factor*. SW5, p. 3, ll. 55–61.

Support worker six offered a similar opinion:

> SW: *If (. . .) we see the involvement of children's social care, sometimes that can make a decision for someone. So, for example, if they're then allocated a social worker or a child protection plan, they might think: "No, I can't be in this relationship. This needs to end."* SW6, p. 1, ll. 17–22.

Discussion

The current study has presented the separation from an abusive partner as resulting from the combined action of two main factors, the "promoters" and the "accelerators." As discussed above, the "promoters" foster a gradual movement toward the separation stage (increasing victims' readiness to leave) whilst the "accelerators" act as powerful vectors, accelerating this process. Interestingly, the proposed separation model bears similarities with Newton's laws of motion (1687, as cited in Haubold and Fairbridge, 1997) and with the first two laws in particular. Indeed, the first law (the "law of inertia") states that "a body continues in a state of uniform rest or motion *unless acted upon by an external force*" (Haubold and Fairbridge, 1997). There is extensive evidence indicating that DA survivors tend to remain in an abusive relationship due to different barriers to leaving (Dunn, 2005; Eckstein, 2011; Saunders, 2020), and our participants mentioned a wide range of factors motivating survivors' decision to stay in the abusive relationship. As our findings indicated, a drastic change in staying or leaving decisions emerged as a result of forces that disrupted the *status quo* of the abusive relationship. In this study, we have called these external forces "promoters" and "accelerators" and our findings highlighted their differential influence on the separation process. Newton's second law states that the acceleration of an object increases if forces are applied and that its acceleration will be directly proportional to the magnitude of the force(s) applied (Haubold and Fairbridge, 1997). As our findings suggested, "promoters" and "accelerators" represent vectors that boost survivors' leaving decisions and accelerate the separation process. Nevertheless, they emerged as bearing different "magnitudes." For example, survivors' realisation that the abuse negatively influenced their children represented a "promoter," which stimulated reflections on the need to leave the perpetrator. In this sense, this promoter had a "moderate magnitude" (as it increased the likelihood of the separation, but did not directly elicit it). Instead, mothers' awareness of their children's life being at risk represented an "accelerator," bearing a remarkable influence (in our metaphor, "magnitude") on the separation process. This considered, in our conceptualisation of the separation process, as in Newton's second law, the process of acceleration (in our case, the journey to leave the perpetrator) is seen as the result of the combined action of different forces ("promoters" and "accelerators"), operating against the resistance to change (Kabe and Sako, 2020). As mentioned above, our participants' narratives highlighted the presence of multiple factors motivating victims' decisions to remain in the abusive relationship, and these factors can be seen as the "resistance" to the change brought forward by the joint action of promoters and accelerators. This ongoing dynamic tension between resistance to change and forces promoting it emerged consistently from our participants' accounts, and clearly outlined the need to abandon models of the separation as a progressive process achieved in multiple sequential stages. Indeed, differently from studies that have adopted the SOC model (Frasier et al., 2001; Cluss et al., 2006; Alexander et al., 2009; Reisenhofer and Taft, 2013), our findings suggest that separation is a non-linear process, with factors and events that might accelerate or decelerate victims' journey toward the end of the abuse. For example, victims still involved with the abuser (who could, therefore, be in the "precontemplation" stage) might suddenly decide to end the violent relationship. Conversely, victims who carefully planned the separation (going through the "contemplation" and "action" stage) might decide to stay or return to the perpetrator after a temporary separation. Similarly, our findings also suggest the need to

go beyond views of the separation process as the result of single "turning points," i.e., changes occurring in survivors' lives at a specific time which ultimately lead them to leave the perpetrator (Chang et al., 2006; Enander and Holmberg, 2008; Murray et al., 2015). As we suggested elsewhere (Di Basilio et al., 2021), a perspective of complexity is needed in order to understand and effectively tackle complex forms of trauma (such as living in an abusive relationship). This entails considering the leaving process as the result of forces ("promoters" and "accelerators") in a state of dynamic tension with centripetal forces promoting the survivors' permanence in the abusive relationship. Conceiving the separation process adopting a complex perspective may also positively influence current practices to help survivors. For example, professionals using the SOC model might follow guidelines on how to support victims depending on the stage of the separation they find themselves in Frasier et al. (2001). This might lead them to overlook important cognitive, emotional and situational factors operating as "promoters" and "accelerators." Hence, we advocate the need to go beyond the focus on single "turning points" and to also abandon the aim of shaping "appropriate interventions that best fit with the TTM stage of change" (Catallo et al., 2012, p. 8). Indeed, our study underlined the importance of shaping support interventions based on a complex evaluation of different psychological and situational factors that dynamically interact during the separation phase. This is in line with recently emerging literature indicating the importance of building survivor-centred interventions (Cattaneo and Goodman, 2015; Goodman et al., 2016). Moreover, our findings offer support to the need for DA professionals and policymakers to assign greater importance to the specific factors propelling victims' decision to leave and the dynamic tension with forces promoting their permanence in the abusive relationship. Lastly, our study indicated a general concordance in the views of survivors and support workers. Nevertheless, survivors mostly described themselves as proactive in achieving and maintaining the separation from their abusive partners. They acknowledged that they benefited from the support of formal and informal sources of help but described the separation process as ultimately led by their deliberate decisions. On the contrary, for support workers, survivors often need to be "guided" through the process of separation, as they are reluctant to leave the perpetrator. According to their narratives, authorities (e.g., police and justice system), services (e.g., social services) and most of all, DA organisations play a key role in allowing survivors to escape the abuse. Hence, victims were usually portrayed by the support workers as passive in achieving the separation, often in need of being prompted about the "right course of action" to permanently end the abuse. Both the survivors' and the support workers' conceptions are likely to be the product of meaning-making processes linked to their personal experiences of the separation process (as DA survivors or professionals). Moreover, DA research suggests that the experience of DA victimisation is often associated with feelings of vulnerability and disempowerment (McDermott and Garofalo, 2004; Bell, 2007; Matheson et al., 2015). Therefore, it is possible that the survivors interviewed might have downplayed the importance of formal sources of support in their leaving and staying away decisions. This might have been motivated by the attempt to offer an image of themselves that reflects the empowerment, sense of control and self-confidence matured after the separation. Conversely, support workers' experiences with DA victims might have contributed to the development of a conception of victims as in need to be supported and guided throughout and after the separation process. Future research must explore further whether the different views held by support workers and survivors influence the help that the latter receive during the separation process. If support workers conceive the role of formal support as essential for survivors, they might focus on promoting victims' engagement with authorities and DA services, potentially overlooking subjective factors (e.g., survivors' change in romantic feelings for the partner) that this study outlined as salient in the separation process.

Limitations

Our participants represent a diverse but not necessarily representative sample of DA survivors and professionals. Moreover, before and during the study, participating survivors received different types of support (e.g., counselling and self-help groups), which may have affected their evaluation of the factors promoting and triggering/accelerating the separation from their abusive partners. Finally, the current study exclusively focused only on female victims of DA. Addressing male victims' views about the promoters and accelerators for leaving the abusive partner is an important direction for future research.

Data availability statement

The datasets presented in this article are not readily available because the authors do not have permission to share the dataset (as this was not indicated in the protocol that received ethical approval). Requests to access the datasets should be directed to DDB, d.di-basilio@mmu.ac.uk.

Ethics statement

The studies involving human participants were reviewed and approved by Manchester Metropolitan University Ethics

Committee. The patients/participants provided their written informed consent to participate in this study.

Author contributions

DDB acted as Principal Investigator for this study, collecting and analysing data and elaborating the conceptual model proposed. ML provided invaluable guidance and support during the research process, whilst FG offered crucial contributions to the conceptual analysis and elaboration of the findings. All authors listed have made a substantial, direct, and intellectual contribution to the work, and approved it for publication.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Understanding sexual violence and factors related to police outcomes

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In the year ending March 2020, an estimated 773,000 people in England and Wales were sexually assaulted. These types of crimes have lasting effects on victims' mental health, including depression, anxiety, and post-traumatic stress disorder. There is a large body of literature which identifies several factors associated with the likelihood of the victim reporting a sexual assault to the police, and these differences may be due to rape myth stereotypes which perpetuate the belief that rape is only "real" under certain conditions. Less is known, however, about the effect these rape myths and stereotypes have on the investigation process itself and the subsequent police outcomes assigned to sex offences. This study aimed to address this gap, providing a profile of all RASSO (rape and serious sexual offences) committed over a 3-year period in one English police force, the police outcomes of these offences, and whether any offences, suspect, or victim variables were associated with different outcomes, in particular the decision to charge or cases where victims decline to prosecute. In line with previous research, the majority of victims were female while the majority of suspects were male, and the most frequent victim–suspect relationship was acquaintance, followed by partner/ex-partner. Charge outcomes were more likely in SSOs and less in rape offences, more likely with stranger offences and less likely than offences committed by partners/ex-partners and relatives, and some non-white suspects were more likely to be charged than suspects of other ethnicities, including white suspects. Victim attrition was more likely in cases where the suspect was a partner or ex-partner and least likely where the suspect was a stranger, more likely in SSOs than in rape cases, and more likely when the victim ethnicity was "other". Law enforcement should be aware of the potential biases, both relating to rape myths and stereotypes and to the biased treatment of victims and suspects based on demographic characteristics, and work to eliminate these to ensure a fairer and more effective RASSO investigative process.

KEYWORDS

sexual violence, rape, rape myths and stereotypes, policing, police outcomes

Introduction

Reports of sexual violence, including rape and serious sexual offences (RASSO), have steadily increased over the last few years, with reported numbers of cases at an all-time high in England and Wales (Home Office, 2022). RASSO can have lasting and devastating effects on victims[1] in several ways including extreme and incessant self-blame (Moor, 2007). Many victims experience the police process as "secondary victimisation," which exacerbates trauma (Campbell and Raja, 1999), with victims facing blame and disbelief from the very people responsible for investigating these offences (Wager et al., 2021). Victims are at risk of developing myriad mental health disorders (Oshodi et al., 2020), including an increase in psychological disorders after the offence, such as major depressive disorder (Petrak et al., 1997), post-traumatic stress disorder (Epstein et al., 1998), and anxiety disorders (Petrak et al., 1997). As well as poor mental health outcomes, victims may also suffer from the physical effects of sexual assault, such as contracting sexually transmitted infections and becoming pregnant, as well as the bodily harm they may have sustained at the time of the assault (Cybulska, 2007; Linden, 2011).

The increase of reporting RASSO has been attributed to the increased spotlight on sex offences, such as the #metoo movement and several high-profile sex offences cases reported in the media (BBC, 2020; Levy and Mattsson, 2021). Despite this reporting increase, charge and conviction rates remain low, with only 1.6% of rapes reported to the police in 2020 resulting in someone being charged (HM Government, 2021). Victim attrition (where a victim withdraws support for the progression of a criminal investigation, as opposed to the formal retraction of an allegation; HMIC/HMCPSI, 2012) in RASSO investigations is high, with large numbers of victims withdrawing from the investigation process before a decision whether or not to charge can be made (Hohl and Stanko, 2015). It is also important to note that some groups still remain underrepresented within the criminal justice system, suggesting that some victims are more likely to seek a police response in the first place (Walker et al., 2021). Despite a number of reviews, little seems to be able to be done in terms of improving the charge rates associated with this offence type that has an already low reporting rate (Stern, 2010).

1 We have used the term "victim" to reflect the terminology used in policing and how the data were recorded in this dataset which is the primary focus of this paper. This is not to ignore or negate the significance of the use of different terminology in this field and the alternatives such as "survivor" and "victim-survivor."

Rape myth stereotypes and their effect on reporting and policing outcomes

Rape mythology has been in discussion since the 1970s (Brownmiller, 1975), including concerns that rape myths reinforce notions of what sexual assault is (and what it is not) and who a credible victim is (Brownmiller, 1975). Burt (1980, p. 217) defined rape myths as "prejudicial, stereotyped and false beliefs about rape, rape victims and rapists." This definition still resonates with the beliefs and concerns surrounding rape myths in today's society. Of a randomly sampled survey of 1,095 adults from across England and Wales, over one quarter believed a woman is partially or completely responsible for being raped if she wore revealing clothing, and over one third believed she was at least partially responsible if she behaved flirtatiously (Amnesty International UK, 2005). Several tools have been designed to measure rape myth acceptance, such as the Illinois Rape Myth Acceptance scale (IRMA; Payne et al., 1999), and the Acceptance of Modern Myths about Sexual Aggression scale (AMMSA; Gerger et al., 2007), with research being conducted to update these tools to reflect, for instance, the subtleties of rape myths (McMahon and Farmer, 2011). Cultural differences in the belief of rape myths have also been explored (Stephens et al., 2016), as well as myths relating to specific circumstances such as domestic violence (Peters, 2008; Giger et al., 2017; Lelaurain et al., 2019). There are factors that have been associated with the increased belief in rape myths, such as being male (Hammond et al., 2011), demonstrating hostility toward women (Lonsway and Fitzgerald, 1995), greater Just World Belief (Russell and Hand, 2017), and having less quality contact with counter-stereotypical women (Taschler and West, 2017), as well as other factors such as greater alcohol consumption, greater religiosity, and lower GPA scores (Navarro and Tewksbury, 2017). While there is some evidence to suggest that rape myth acceptance can be decreased by attending rape awareness workshops (Hinck and Thomas, 1999), other evidence suggests the rape myths are enduring and resistant to training designed to combat these attitudes, with behavioural performance, but not cognitive or attitudinal outcomes, changing after training (Lonsway et al., 2001). While certain beliefs about what rape "should" be are widespread and feed into the idea of a "real rape stereotype," they are not supported by ongoing research into the area. For instance, it is commonly thought that rape is most often perpetrated by an unknown individual, but it is evident that rape and sexual assault is more often committed by a known offender (Waterhouse et al., 2016).

There is evidence to suggest that these erroneous views about rape have an effect on a victim's decision to report an offence to the police. Despite the greater prevalence of acquaintance rape, for instance, a stranger rape is more likely to be reported to the police than an acquaintance rape (Campbell et al., 2001). Wolitzky-Taylor et al. (2011) found similar barriers

to reporting, such as the suspect not being a stranger, or the victim using drugs or alcohol, which demonstrates many of the same barriers faced by victims for decades and the influence of "real rape" stereotyping on the decision to report (Jordan, 2011). Reasons given for not reporting a rape to the police included *embarrassment* (over 40%) and *didn't think they would believe me* (over 20%) (Office for National Statistics, 2021), which could suggest that victims are aware of the prevalence of disbelief in law enforcement regarding rape offences and are therefore deterred from reporting, particularly when their offence does not adhere to the "real rape" stereotype (Smith and Daly, 2020; Champion et al., 2021).

These biases can also be seen to affect, not just the decision to report, but the investigative process and police outcomes should a victim decide to disclose the offence to the police (Murphy et al., 2022). Indeed "In terms of the investigation and prosecution of rape offences, such myths are influential from the moment of first reporting and the initial response the complainant receives, right through to decisions regarding whether or not an offender will be prosecuted, and whether courts and juries will decide to convict or acquit." (Jordan, 2011, p. 243). Sleath and Bull (2015), for instance, found that United Kingdom police officers were more likely to subscribe to *she lied* myths than a control group of United Kingdom students, and there is evidence to suggest officers substantially overestimate the number of false allegations (Rumney, 2006; Saunders, 2012; McMillan, 2018), based on "stereotypes regarding the complainant's behaviour, attitude, demeanour or possible motive" (Jordan, 2004, p. 48). Hansen et al. (2019), having reviewed 248 rape cases reported to a single Danish police district, found no evidence of investigative bias toward rape stereotypes but, using a combination of four case characteristics associated with common rape myths (namely whether the perpetrator was a stranger, victim intoxication, evidence of victim resistance, and the infliction of physical injuries to the victim), significantly predicted the likelihood of cases continuing for prosecution, with Campbell et al. (2001) also demonstrating cases involving a stranger offender being more likely to lead to prosecution. Further, in reviewing 679 cases reported to a single United Kingdom police force during a 2-month period, Hohl and Stanko (2015) presented evidence to support the influence of some rape myths on case attrition, such as victim alcohol consumption prior to the incident, but not the involvement of physical injury to the victim nor the victim-perpetrator relationship, suggesting that these stereotypes affect a range of different investigative outcomes. In a study directly investigating the relationship between rape myth acceptance and the judgements police officers make about victim and suspect responsibility and the authenticity of the report, it was found that higher rape myth acceptance in officers was associated with victims being held more responsible for the offences and suspects less responsible, with the case being considered less "authentic" overall (Hine and Murphy, 2019). While not the primary focus of this paper, it is also worth noting that post policing outcome these myths are likely to affect the latter parts of the criminal justice process, such as juror decision making (Willmott et al., 2021). In summary, there is some evidence to suggest that these widely held and erroneous beliefs not only deter victims from reporting but, if they do decide to report, may result in them being met with bias from law enforcement which affects the progress of the investigation.

The effect of poor policing on victim wellbeing

While literature on this topic is mixed (Sleath and Bull, 2017), likely owing to difficulties isolating the influence of rape myths from other factors such as evidentiary value of physical injuries (Hansen et al., 2019) and geographical differences associated with different local cultures and training provision, the results of these biases within the criminal justice system are that, as well as deterring victims from reporting offences in the first place, rape myths may also have an effect on the process of a police investigation and the subsequent police outcome. Not only does this impact on a victim's right to justice, but it can have a direct impact on a victim's wellbeing. Going through the process of reporting and pursuing a rape offence can be a traumatising experience for the victim (Maier, 2008), with evidence to suggest that the legal process associated with reporting and pursuing a rape case can negatively impact a victim (Sloan, 1995; Campbell and Raja, 1999), and there is evidence to suggest that poor policing can make the victim's experience even worse. For instance, while 52% of victims rated the experience of seeking legal aid harmful, cases were more likely to be rated as harmful if the case did not result in a prosecution (Campbell et al., 2001). Thus, understanding how stereotypical beliefs may affect the investigative process in terms of the outcomes assigned to cases is important, both from a justice but also from a victim welfare perspective.

The current study

Access to a large policing dataset as part of Project Bluestone[2] provided the researchers with an opportunity to

2 Operation Soteria Bluestone is a United Kingdom Home Office-funded programme designed to improve the investigation of rape and serious sexual offences (RASSO) in England and Wales. It is a unique project which is underpinned by rigorous social science. With multi-disciplined academics located in multiple universities, mixed qualitative and quantitative methods are applied to a five pillared approach to organisational change with police forces, uplifting the capability of more

explore the nature of sexual violence and the criminal justice process by analysing over 10,000 RASSO reports from a 3-year period in one English police force. Importantly, the dataset allowed us to provide a more complete picture of the types of offences being reported, because we are considering all "incidents" reported within this police force, rather than only convicted cases. The data also enabled us to assess whether certain policing outcomes, such as the closing of a case based on insufficient evidence, or the progression of a case to charge, is associated with any of the victim or suspect details contained within the data. If differences were seen in outcomes, they were assessed to explore whether the rape myth narrative influences the criminal justice process, not just at the reporting stage, but also at the investigation and charging stage.

In summary, the aims of this study were to explore:

1. The types of RASSO offences reported, and the number and types of suspects and victims associated with these offences;
2. The outcomes of RASSO;
3. Whether any specific variables are associated with particular outcomes, and whether this fits with rape myths and stereotyping.

Materials and methods

Sample

All incidents of RASSO recorded by Avon and Somerset Constabulary (ASC), United Kingdom, during a 3-year period from the beginning of January 2018 to the end of December 2020 were sampled. The types of offences included in the RASSO definition – as defined by ASC – are listed in **Supplementary Appendix A**. This totalled 10,348 offences,[3] including 8,273 unique victim identities and 6,010 unique suspect[4] identities. 10,040 of these offences were associated with different suspect and victim identities, meaning that in 308 offences either multiple suspects or multiple victims offending/being offended against during the same incident. The dataset contained 47 variables which related to the offence itself, as well as the suspects and victims involved in the offences.

Procedure

Data were collected as part of Project Bluestone, taken from records held by ASC in their crime recording system, NICHE. NICHE is a system used by officers and administrative staff in ASC that records details of every offence reported to them, including information on the crime itself, the people involved, and the process of the investigation and police outcomes assigned. ASC's NICHE system is not linked to other police forces' systems in the United Kingdom and therefore contains details of offences committed in their jurisdiction only. Variables the researchers were interested in exploring as part of Project Bluestone were requested from ASC; the data were then collated by a member of ASC, who ensured that all data were fully anonymised before securely transferring it to the research team. The data then underwent some recoding before it could be analysed:

- Ethnicity was grouped into white, dark European, African Caribbean, Asian, Chinese, Japanese or other Southeast Asian, Arabic, and other using police IC codes; unknown ethnicity was excluded from analysis;
- The 20 relationship options (see **Supplementary Appendix B** for a full list) were grouped into relative, partner, acquaintance, and stranger; unknown relationships were excluded from analysis[5];
- Any suspect or victim gender that was marked as "indeterminate" was excluded from the analysis due to low numbers;
- The victim age, both at reporting and when the offence occurred, was grouped into 16 years old and over, 13–15 years old, and under 13 years old[6];

specialist police decision-making in RASSO cases. The research informs policing practice as well as government policy and is set to inform a national change. These research informed pillars pinpoint specific areas for improvement which will form part of the new framework for investigating RASSO: (1) suspect-focused investigations; (2) disrupting repeat offenders; (3) victim engagement as procedural justice; (4) promoting better learning, development, and wellbeing for police officers; and (5) using data more effectively in RASSO investigations. The pathfinder project started in 2021, based in Avon and Somerset Constabulary. Designed by Katrin Hohl and Betsy Stanko, the pillar leads include Kari Davies, Miranda Horvath, Kelly Johnson, Jo Lovett, Olivia Smith, and Emma Williams.

3 This excluded 277 duplicate cases, identified when they had the same offender, victim, and offence ID.

4 The term suspect has been used in recognition of the fact that those named have not necessarily been charged and convicted for the offence in which they were named.

5 We followed ASC's definitions of these categories in order to group the more specific variables. All partner and ex-partner variables were grouped into "partner," and all types of family and relative variables (including step-relatives) were categorised into "relative." The "stranger" category contains only the "stranger" variable, defined as both suspects who had had no contact with the victim prior to the offence, as well as those suspects who had had limited contact with the victim which may have facilitated the offence (e.g., meeting on a dating app). The "acquaintance" category, again, only contains the "acquaintance" variable, defined in ASC as any suspects not falling into the above categories, and ranging from suspects the victim may have known casually, friends, colleagues, and people in positions of power such as teachers.

6 The age ranges were chosen as a reflection of the offence categories used in England and Wales legislation.

TABLE 1 Victim age when offences were committed and when they were reported, overall and broken down by offence type.

	Age when reported				Age when committed			
	Rape	SSO	Non-contact	All offences	Rape	SSO	Non-contact	All offences
Under 13	202 (4.22)	677 (13.40)	18 (60.00)	897 (9.09)	491 (11.19)	1,047 (22.10)	24 (92.31)	1,562 (17.07)
13-15	416 (8.69)	656 (12.98)	3 (10.00)	1,075 (10.89)	471 (10.74)	653 (13.79)	–	1,124 (12.28)
16+	4,167 (87.08)	3,720 (73.62)	9 (30.00)	7,896 (80.02)	3,425 (78.07)	3,037 (64.11)	2 (7.69)	6,464 (70.64)
Total	**4,785 (100)**	**5,053 (100)**	**30 (100)**	**9,868 (100)**	**4,387 (100)**	**4,737 (100)**	**26 (100)**	**9,150 (100)**

- The suspect's age, both at reporting and when the offence occurred, was grouped into 16 years old and over, 13–15 years old, and under 13 years old;
- RASSO was grouped into all rape offences, all sexual assault offences, and all non-contact offences;
- The police outcomes were also recoded, from 21 outcomes (see **Supplementary Appendix C** for a full list) into five, broader categories: (1) case not progressed for logistical reasons (such as the suspect dying); (2) NFA (no further action); (3) case is resolved but not charged (such as the use of a community resolution); (4) the victim declines to prosecute; and (5) suspect charged.

Analysis

Descriptive data are presented for the victims and suspects. Chi-square analysis was used to determine any significant differences between offence type and victim–suspect relationship, and offence type and outcome. One-way ANOVAs with type of offence as the factor and age entered as the dependent variable were used to assess mean age differences. To establish relationships between victim and suspect demographics and an outcome of charged or an outcome of victim does not want to proceed, univariate logistic regressions and multiple binary logistic regressions using a backward stepwise elimination procedure were conducted. Type of offence, victim–suspect relationship, victim and suspect sex, victim and suspect age, and victim and suspect ethnicity were entered as predictors and either "charged yes/no" or "victim does not want to proceed yes/no" were entered as the outcome. All analyses were performed using SPSS version 28.

Results

Types of rape and serious sexual offences offences reported

There were 4,957 (47.90%) rapes, 5,357 (51.77%) SSOs, and 34 (0.33%) non-contact offences.

Victims

There were 10,348 RASSO occurrences for 2018–2020; which included 8,273 victims.

Victim age

Each victim had their age recorded for when the offence was committed and for when the offence was reported. Cases where the age was missing or below 0 were excluded. The average age at the time of offence was 24.66 years (SD: 14.67; range: 0–116; missing = 831, 8.22%, plus another 59 cases (0.59%) where age was under 0) and average at the time of reporting was 27.80 [SD: 14.89; range: 0–100; missing = 169 (1.68%), plus another 3 cases (0.00%) where age was under 0]. **Table 1** shows the victim age when offences were committed and when they were reported, overall and broken down by offence type. Non-contact victims were significantly younger than SSO and rape victims and SSO victims were significantly younger than rape victims at the time of the offence [$F(2, 9{,}147) = 56.09$, $p < 0.001$] and at time of reporting [$F(2, 9{,}865) = 61.08$, $p < 0.001$].

Victim gender

Gender was missing in 256 (2.47%) instances. **Table 2** shows that females were the majority of victims for all types of offence, however, this was most noticeable for rape, where male victims made up less than 10% of cases.

Victim ethnicity

Ethnicity was missing for 4,623 (44.68%) cases. The majority of victims were white for all offence types (see **Table 3**).

Suspects

There were 10,348 RASSO occurrences for 2018–2020; of these 3,317 (32.05%) had no identified suspect, whereas 7,031 (67.95%) had at least one suspect identified.

Suspect age

Each suspect had their age recorded for when the offence was committed and for when the offence was reported. Cases where the age was missing or below zero were excluded. Average age at the time of offence was 32.59 [SD: 16.13; range: 0–100; missing = 4,042, 39.06%, plus another 3 cases (0.00%) where age was under 0] and average at the time of reporting was 35.84 [SD: 17.83; range: 0–120; missing = 3,636 (35.14%), plus another 1 case (0.00%) where age was under 0]. Table 4 shows the suspect age when offences were committed and when they were reported, overall and broken down by offence type. SSO suspects were significantly older than rape suspects at the time of offence, [$F(2, 6{,}300) = 20.85$, $p < 0.001$], and this was the same for age at reporting [$F(2, 6{,}710) = 20.79$, $p < 0.001$]. There were no significant age differences with non-contact suspects and rape/SSO suspects.

Suspect gender

Suspect gender was missing in 3,375 instances (32.61%). The majority of suspects were male in rape, SSO, and non-contact offences as can be seen in Table 5.

TABLE 2 The gender of the victims in the dataset.

	Rape	SSO	Non-contact	Total (%)
Male	428 (8.79)	933 (17.98)	11 (34.38)	1,372 (13.59)
Female	4,442 (91.21)	4,257 (82.02)	21 (65.63)	8,720 (86.41)
Total	**4,870 (100)**	**5,190 (100)**	**32 (100)**	**10,092 (100)**

Suspect ethnicity

Suspect ethnicity was missing in 5,416 instances (52.33%). The majority of suspects in all offence types were white as shown in Table 6.

Suspect–victim relationship

Relationship data were missing in 5,427 (52.44%) of cases. Table 7 shows that where these data available, the most common relationship was acquaintance, and almost a quarter of cases were committed by (ex-) partners. Differences between relationships by offence type were significant ($x^2 = 620.90$, $p < 0.001$). Partners were more likely to commit rape and less likely to commit SSO than any other relationship. Acquaintances were least likely to commit non-contact offences and more likely to commit rape than strangers, whilst strangers were more likely to commit SSO than acquaintances.

Single/multiple suspects

There were 10,040 unique crimes; 3,304 (32.91%) had no identified suspect, leaving 6,736 unique crimes where a suspect had been identified. Of these, 211 (3.13%) had multiple suspect IDs associated with them. The number of identified suspects per incident ranged from 1 to 10. There were also 107 (1.07%) occurrences which were classified as being conducted by multiple undefined offenders (this was indicated in the offence description and only had one suspect ID associated with them), bringing the total number of offences committed

TABLE 3 Victim ethnicity broken down by offence type.

	Rape	SSO	Non-contact	Total (%)
IC1 – White	2,744 (87.28)	2,300 (89.46)	10 (100)	5,054 (88.28)
IC2 – Dark European	79 (2.51)	51 (1.98)	–	130 (2.27)
IC3 – African Caribbean	142 (4.52)	87 (3.38)	–	229 (4.00)
IC4 – Asian	51 (1.62)	50 (1.94)	–	101 (1.76)
IC5 – Chinese, Japanese, or other Southeast Asian	16 (0.51)	7 (0.27)	–	23 (0.40)
IC6 – Arabic	9 (0.29)	4 (0.16)	–	13 (0.23)
Other	103 (3.28)	72 (2.80)	–	175 (3.06)
Total	**3,144 (100)**	**2,571 (100)**	**10 (100)**	**5,725 (100)**

TABLE 4 Suspect age when offences were committed and when they were reported, broken down by offence type.

	Age when reported				Age when committed			
	Rape	SSO	Non-contact	Total	Rape	SSO	Non-contact	Total
Under 13	78 (2.52)	183 (5.73)	1 (5.88)	262 (4.16)	31 (0.93)	130 (3.85)	–	161 (2.40)
13-15	243 (7.85)	356 (11.15)	1 (5.88)	600 (9.52)	186 (5.61)	333 (9.87)	1 (5.26)	520 (7.75)
16+	2,773 (89.63)	2,653 (83.11)	15 (88.24)	5,441 (86.32)	3,101 (93.46)	2,911 (86.28)	18 (94.74)	6,030 (89.85)
Total	**3,094 (100)**	**3,192 (100)**	**17 (100)**	**6,303 (100)**	**3,318 (100)**	**3,374 (100)**	**19 (100)**	**6,711 (100)**

TABLE 5 Suspect gender, broken down by offence type.

	Rape	SSO	Non-contact	Total (%)
Male	3,395 (99.27)	3,248 (91.91)	18 (94.74)	6,661 (95.53)
Female	25 (0.73)	286 (8.09)	1 (5.26)	312 (4.47)
Total	**3,420 (100)**	**3,534 (100)**	**(100)**	**6,973 (100)**

by multiple suspects to 318. The 107 offenders listed as "multiple undefined" are represented in Table 8 under "multiple unknown" because it is unknown how many suspects were involved in these offences.

Outcomes

There were 880 (8.50%) cases where the outcome was missing (likely due to the fact that these cases were still ongoing). Where outcome was present, the majority of cases were either NFAed or the victim decided they did not want to proceed with the investigation, as shown in Table 9. Differences between offence type by outcome were significant (x^2 = 305.35, $p < 0.001$). SSO cases were more likely to be closed due to logistical reasons or be resolved but not charged than rape cases. Non-contact cases were more likely than rape and SSO to end in NFA, likewise, SSO was more likely than rape to end in NFA. Rape cases were least likely to end in a charge and most likely to end in an outcome of victim does not want to proceed, whilst non-contact cases were least likely to end in an outcome of victim does not want to proceed.

Factors predicting a charge outcome

In the multivariate analysis, type of offence, victim–suspect relationship, and suspect ethnicity predicted a charge outcome (see Table 10). SSO cases had greater odds (OR 3.22; 95% CI 2.06–5.02) of a charge outcome than rape cases. Compared to acquaintances, partners (OR 0.55; 95% CI 0.31–0.97) and relatives (OR 0.41; 95% CI 0.17–0.98) had decreased odds of having a charge outcome, whereas strangers had increased odds (OR 2.59; 95% CI 1.64–4.10), and dark European suspects (OR 4.00; 95% CI 1.89–8.47) and Arab or North African suspects (OR 6.86; 95% CI 1.61–29.23) had greater odds of a charge outcome than white suspects. The relationship for Black suspects just missed significance (p = 0.051). However, the model only explained 14.7% of the variance.

For the outcome victim does not want to proceed, the final model included type of offence, victim–suspect relationship, and victim ethnicity (see Table 11). SSO cases had decreased odds (OR 0.72; 95% CI 0.61–0.86) of receiving an outcome of victim does not want to proceed. Compared to acquaintances, partners had increased odds (OR 1.50; 95% CI 1.21–1.86) of an outcome of victim does not want to proceed while strangers had decreased odds of this outcome (OR 0.60; 95% CI 0.47–0.76), and victims with the ethnicity "other" had increased odds (OR 2.03; 95% CI 1.18–3.49) of an outcome of victim does not want to proceed compared to white victims. However, the model only explained 5.1% of the variance.

Discussion

What the profile of rape and serious sexual offences and reporting rates look like in Avon and Somerset Constabulary

This dataset allowed us to gain an insight into the victim, suspect, and types of offences reported to ASC over a 3-year period. The sample comprised of just under 50% rape offences and just over 50% SSOs, with non-contact RASSO (which, as noted in Supplementary Appendix A, does not include offences such as exhibitionism or voyeurism), accounting for just 0.3% of the sample. The definition of RASSO was decided on by ASC, and these non-contact RASSO cases seem to conceptualised as offences that led to a rape or SSO, despite the offender themselves not committing the contact offence. The average age of the victims at the time of the offences was 24.66 years, with SSO offenders younger than rape offenders, and non-contact offenders younger than rape and SSO offenders. The majority of victims were female (86.41%), with the split less pronounced for non-contact offences (male = 34.38%; female = 65.63%). The majority of victims were white. In around two thirds of the incidents (67.95%) at least one suspect had been identified. When this was the case, the average offender age was 32.59 years old, and 95.53% offenders were male, with this gender split remaining relatively consistent across all crime types. As with the offenders, the majority of suspects were white. In terms of the victim–suspect relationship, and in line with previous research, the most common relationship was acquaintance, while almost a quarter of offences were committed by partners or ex-partners.

It is important to caveat this profile of RASSO with the fact that these are the offences that are reported to the police, so while this may provide us with a more complete picture of sex offending, including where suspects have been named in a police investigation, this will still necessarily omit offences that have not been reported. As noted above, there are likely to be factors that affect reporting rates, such as the suspect–victim relationship, so this needs to be considered when taking these figures into account, particularly when considering that only around 11% of

TABLE 6 Suspect ethnicity, broken down by offence type.

	Rape	SSO	Non-contact	Total (%)
IC1 – White	2,063 (80.09)	1,931 (82.45)	13 (92.86)	4,007 (81.24)
IC2 – Dark European	82 (3.18)	67 (2.86)	–	149 (3.02)
IC3 – African Caribbean	261 (10.13)	157 (6.70)	–	418 (8.48)
IC4 – Asian	92 (3.57)	96 (4.10)	1 (7.14)	189 (3.83)
IC5 – Chinese, Japanese, or other Southeast Asian	7 (0.27)	7 (0.30)	–	14 (0.28)
IC6 – Arabic	17 (0.66)	19 (0.81)	–	36 (0.73)
Other	54 (2.10)	65 (2.78)	–	119 (2.41)
Total	**2,576 (100)**	**2,342 (100)**	**14 (100)**	**4,932 (100)**

TABLE 7 The suspect–victim relationship, broken down by offence type.

	Rape	SSO	Non-contact	Total (%)
Partner	948 (39.98)	257 (10.16)	–	1,205 (24.49)
Relative	305 (12.86)	513 (20.28)	9 (45.00)	827 (16.81)
Acquaintance	850 (35.85)	1,238 (48.93)	4 (20.00)	2,092 (42.51)
Stranger	268 (11.30)	522 (20.63)	7 (35.00)	797 (16.20)
Total	**2,371 (100)**	**2,530 (100)**	**20 (100)**	**4,921 (100)**

rape offences are actually reported in the first place (Stern, 2010).

It is also important to highlight that there are significant amounts of missing data in our dataset, such as the 52.33% of missing suspect ethnicity (even when the suspect was identified) or the 52.44% of missing suspect–victim relationship data. It is not possible to know whether the types of offence, suspect, or victim involved affects a police officer's decision to record this information. However, the fact that 32.05% of suspects were not identified, but only 16.20% of offenders were strangers (not including where data were missing), suggests that even when victim–suspect relationship is known it is not being recorded. This may be indication of instances where relationship type – particularly where they are acquaintances, relatives, or partners/ex-partners – are not being systematically recorded.

Most of the cases had policing outcomes attributed to them; however, 8.50% did not, even though the data were recorded between January 2018 and December 2020, but not compiled until January 2021. This means that these 8.50% of cases with outstanding outcomes were at least 1 year old from the date of reporting. This is in line with current figures demonstrating the lengthy nature of RASSO investigations (Murray, 2022). Where outcomes were available, the majority of cases were either dropped by the police or the victim decided not to proceed. Only in 4.71% of offences was there a charge outcome, which dropped to 2.62% for rape (the charge rates of SSO and non-contact rates were higher at 6.54% and 14.81%, respectively). Again, this is in line with recent figures which demonstrates the low number of charges overall and the high level of victim attrition (Ministry of Justice, 2021).

Are there any factors associated with charges/victim declines to prosecute?

In terms of the factors that predicted a charge outcome, strangers were more likely and relatives/partners and ex-partners were less likely to have charge outcomes than other types of victim–suspect relationships, and SSO cases were more likely to be charged than rape offences. The fact that stranger offences are more likely to be charged is in line with the literature discussed above (e.g., Rumney et al., 2016), and with the idea that these offences are more likely to be taken seriously and thus progressed through the criminal justice system. In terms of the SSO cases being more likely to result in a charge, we could hypothesise that this is due to the victims in these cases being significantly younger, and therefore less likely to be subject to victim blaming or rape myth stereotyping. However, age was not part of the model that predicts charge outcomes so this theory requires further exploration.

There were also several factors that predicted victim attrition from the investigation process. SSO cases, while being more likely to predict charge outcomes than rape offences, were also less likely to have an outcome of victim does not want to proceed. Victims where the suspect in the case was either a partner or an ex-partner were more likely not to proceed with the investigation than acquaintances, which is a particular concern from a safeguarding perspective where victims may well still be living with the perpetrator. Offences involving strangers were also less likely to have an outcome of victim does not want to proceed, again suggesting these offences are taken more seriously and therefore the victim feels more able to proceed through the process. It is important to note here that both of these regression models – particularly the model predicting victim attrition – explained only a small amount of the variance, so any conclusions drawn from these analyses should be treated with caution.

TABLE 8 The number of offences committed by single versus multiple suspects.

	Rape	SSO	Non-contact	Total
1 suspect	3,132 (94.17)	3,269 (96.37)	17 (94.44)	6,418 (95.28)
2 suspects	68 (2.04)	98 (2.89)	1 (5.56)	167 (2.48)
3+ suspects	19 (0.57)	25 (0.74)	–	44 (0.65)
Unknown multiple suspects	107 (3.22)	–	–	107 (1.59)
Total	**3,326 (100)**	**3,392 (100)**	**18 (100)**	**6,736 (100)**

TABLE 9 The charges associated with each offence, broken down by offence type.

	Rape	SSO	Non-contact	Total
Logistical reasons	34 (0.76)	75 (1.51)	1 (3.70)	110 (1.16)
NFA	1,666 (37.25)	2,107 (42.41)	18 (66.67)	3,791 (40.04)
Resolved but not charged	42 (0.94)	216 (4.35)	1 (3.70)	259 (2.74)
Charged	117 (2.62)	325 (6.54)	4 (14.81)	446 (4.71)
Victim does not want to proceed	2,614 (58.44)	2,245 (45.19)	3 (11.11)	4,862 (51.35)
Total	**4,473 (100)**	**4,968 (100)**	**27 (100)**	**9,468 (100)**

While some of these findings suggest that there may be aspects of rape stereotyping that is feeding into the investigative process and ultimately the policing outcomes assigned to cases, there were also some other factors predictive of charges and victim attrition that may be indicative of other types of bias within policing. Cases with some non-white suspects were more likely to result in a charge, which potentially demonstrates a worrying increase in the targeting of non-white suspects. Previous research has demonstrated that white women were more likely to have their cases prosecuted than women from ethnic minorities (Campbell et al., 2001), while Hohl and Stanko (2015) determined that that non-white suspects' cases were less likely to be "no-crimed." Taken together, this and previous research raise concerns of the influence of stereotypes around victims and suspects on police decision making.

The discrepancy we see in outcomes may be related to the fact that some offences are inherently more difficult to investigate. For instance, are domestic offences more likely to take place within a home location and without witnesses, compared to stranger offences that may take place in public spaces? While there is some limited information which tells us about the specific behavioural characteristics of offences where relationship type or suspect/victim characteristics differ (e.g., more weapon threat seen in stranger compared to acquaintance rape; Bownes et al., 1991) there is little research in this area which does not provide us with a comprehensive views of these differences, and this dataset did not provide this level of detail. However, perhaps the more important question to ask here is whether the degree of investigative difficulty, whether perceived or real, is a hindrance to a full investigation being conducted in the first place. The fact that research and recent reviews all suggest that a victim's credibility is under scrutiny over and above the circumstances of the offence or the suspect identified, suggests that law enforcement are not taking a suspect focused approach to the investigation which may be hindering them from considering potential lines of inquiry when the investigation is perceived to be difficult. As noted above, while specialism in RASSO investigations may prove useful in many contexts (Dalton et al., 2022), including specialist training designed to combat rape myth acceptance, real attitudinal and cognitive change seems to be difficult to achieve (Lonsway et al., 2001). In short, it is possible that a combination of victim credibility and factors that fall outside of the "real rape" scenario are preventing thorough and fair investigations from being conducted. This lack of willingness to fully investigate these types of offences, particularly where it is assumed that the allegation turns on an issue of consent (not that this, in itself, means that a case cannot be progressed), means that law enforcement may well be missing potential opportunities to target repeat and persistent offending often demonstrated by sex offenders (Abel et al., 1987).

Limitations and future work

This is a preliminary study into the links between victim, suspect, and offence characteristics and the associated police outcomes, based on data from one police force. Further work needs to be conducted to see if the trends seen here are indicative of trends nationally. More information also needs to be gathered on the way in which victim, suspect,

TABLE 10 Univariate and multivariate binary logistic regression predicting a charge outcome.

	Univariate logistic regression analysis			Multiple logistic regression analysis[a]		
Factor	**OR**	**(95% CIs)**	***P*-value**	**OR**	**(95% CIs)**	***P*-value**
Offence type						
Rape	1			1		
SSO	2.67	2.16–3.31	<0.001	3.22	2.06–5.02	<0.001
Non-contact	5.52	1.91–15.91	0.002	0.00	0.00	1.00
Relationship						
Acquaintance	1			1		
Relative	1.24	0.82–1.88	0.316	0.41	0.17–0.98	0.045
Partner	0.49	0.30–0.81	0.005	0.55	0.31–0.97	0.04
Stranger	2.10	1.46–3.02	<0.001	2.59	1.64–4.10	<0.001
Victim gender				–		
Male	1			–		
Female	1.02	0.77–1.35	0.92	–		
Suspect gender				–		
Male	1			–		
Female	0.53	0.29–0.97	0.04	–		
Victim age[b]	0.98	0.98–99	<0.001	–		
Suspect age[b]	1.01	1.01–1.02	<0.001	–		
Victim ethnicity				–		
IC1 – White	1			–		
IC2 – Dark European	0.83	0.30–2.26	0.71	–		
IC3 – Black	0.48	0.18–1.29	0.14	–		
IC4 – Asian	1.12	0.41–3.06	0.83	–		
IC5 – Chinese, Japanese, and other Southeast Asian	0.00		0.99	–		
IC6 – Arab or North African	0.00		0.99	–		
Other	0.94	0.41–2.16	0.89	–		
Suspect ethnicity						
IC1 – White	1			1		
IC2 – Dark European	2.38	1.38–4.11	0.002	4.00	1.89–8.47	<0.001
IC3 – Black	1.94	1.37–2.76	<0.001	1.78	1.00–3.19	0.051
IC4 – Asian	1.07	0.57–2.01	0.83	1.50	0.57–3.98	0.412
IC5 – Chinese, Japanese, and other Southeast Asian	1.63	0.21–12.96	0.64	0.00	0.00	0.999
IC6 – Arab or North African	5.29	2.44–11.49	<0.001	6.86	1.61–29.23	0.009
Other	1.68	0.83–3.39	0.15	1.32	0.39–4.46	0.658

[a] Variables included offence type, relationship, suspect sex, victim age, suspect age, and suspect ethnicity.
[b] At time of the offence.

and offence characteristics have an impact on, not only the ultimate policing outcome, but also the different aspects of the investigation. This includes the efforts involved to investigate reasonable lines of enquiry and the timeliness with which this is conducted, the point at which the suspect is spoken to, and the manner in which the victim is treated. Further work is also required to explore the particular circumstances of the offences, such as the type of approach used by the suspect to contact the victim, and the method of control used, to assess how these factors affect the investigation and associated outcomes. For this, and as noted above, information needs to be routinely gathered by law enforcement, not least so that they can conduct their own analyses into the efficacy of their procedures. Importantly, where iniquities in the investigative process are found, these need to be eradicated. Work with law enforcement is required to understand where biases in conducting investigations occur and why, in order that they can be eliminated. Equally, work should also be conducted to examine the effects of the groupings used here, including the victim–suspect relationship groups used and the age ranges chosen. Further work could also be conducted to explore the

TABLE 11 Univariate and multivariate binary logistic regression predicting an outcome of victim does not want to proceed.

	Univariate logistic regression analysis			Multiple logistic regression analysis[a]		
Factor	**OR**	**(95% CIs)**	***P*-value**	**OR**	**(95% CIs)**	***P*-value**
Offence type						
Rape	1			1		
SSO	0.59	0.54–0.64	<0.001	0.72	0.61–0.86	<0.001
Non-contact	0.09	0.03–0.30	<0.001	0.29	0.03–2.80	0.283
Relationship						
Acquaintance	1			1		
Relative	0.69	0.58–0.82	<0.001	0.92	0.71–1.21	0.559
Partner	1.71	1.46–1.99	<0.001	1.50	1.21–1.86	<0.001
Stranger	0.58	0.49–0.69	<0.001	0.60	0.47–0.76	<0.001
Victim gender				–		
Male	1			–		
Female	1.42	1.26–1.60	<0.001	–		
Suspect gender				–		
Male	1			–		
Female	1.08	0.86–1.37	0.504	–		
Victim age[b]	1.01	1.01–1.01	<0.001	–		
Suspect age[b]	0.999	0.99–1.00	0.588	–		
Victim ethnicity						
IC1 – White	1			1		
IC2 – Dark European	0.86	0.61–1.23	0.42	0.73	0.43–1.24	0.24
IC3 – Black	1.47	1.11–1.96	0.007	1.45	0.86–2.42	0.16
IC4 – Asian	1.07	0.70–1.62	0.768	0.69	0.37–1.29	0.25
IC5 – Chinese, Japanese, and other Southeast Asian	0.80	0.33–1.92	0.616	0.48	0.04–5.27	0.55
IC6 – Arab or North African	1.12	0.35–3.53	0.849	0.96	0.09–10.73	0.974
Other	1.74	1.24–2.42	0.001	2.03	1.18–3.49	0.010
Suspect ethnicity				–		
IC1 – White	1			–		
IC2 – Dark European	0.68	0.46–1.01	0.054	–		
IC3 – Black	1.10	0.87–1.38	0.419	–		
IC4 – Asian	0.97	0.69–1.37	0.868	–		
IC5 – Chinese, Japanese, and other Southeast Asian	0.51	0.13–2.03	0.338	–		
IC6 – Arab or North African	1.02	0.47–2.20	0.970	–		
Other	0.94	0.60–1.47	0.788	–		

[a]Variables included offence type, relationship, victim sex, victim age, and victim ethnicity.
[b]At time of the offence.

differences between different types of suspects and victims where more detailed information, such as different types of acquaintances, for instance, are recorded in different police forces. The consistency with which these types of data are recorded by police is also a necessary avenue of future research, to assess the variance with which these variables are recorded and consequently to understand how this may affect the results of studies such as these. The amount of missing data seen here suggests that data recording may not be a straightforward (or even routine, for some variables) process in policing.

Conclusion

Many people become victims of RASSO in their lifetime, and yet the police response to these types of crimes is inadequate, with many victims feeling unable to report to the police, and when they do, being met with unequal treatment and low rates of charge. This study confirmed these low charge rates, as well as high victim attrition rates, in our 3-year sample. The analyses also demonstrated inequalities in outcomes, depending on offence, victim, and suspect type. These findings are in line with previous research and highlight the urgent need for

improvement to our criminal justice system process to provide victims with better access to justice.

Data availability statement

The data analysed in this study was subject to the following licences/restrictions: the dataset is subject to agreements with the data owners that prohibit the researchers from sharing it. Requests to access these datasets should be directed to Avon and Somerset Constabulary.

Author contributions

KD and MH: concept, writing, editing, and supervision. RS: analysis, writing, and editing. EC and MC: writing. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

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To be assertive or not to be assertive: That is the question! Students' reactions to sexual harassment in academia

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Introduction: In the literature, no integrated definition of sexual harassment (SH) occurs but there is clear unanimity about SH being offensive, humiliating, and intimidating behavior. Within academic settings, SH has severe negative effects on students' physical or emotional wellbeing as well as on their ability to succeed academically.

Methods: The aim of this study was to investigate the relationship between sex, gender roles, and the ways to manage SH (assertive and nonassertive reactions) in university students. It was hypothesized that female students would report more nonassertive reactions compared to male students. In addition, following the Bem theory on gender roles and using the self-report tool by the same author, it is hypothesized that female and male students, who are classified as feminine, will report more nonassertive responses, whereas male and female students, who are classified as masculine, will report more assertive responses. Our hypothesis was tested with a sample of 1,415 university students (593 men, 41.9%, and 822 women, 58.1%) who completed a questionnaire approved by the local ethical review board for research from the end of January 2019 to the first half of February 2019.

Results: Contrary to our hypothesis, results showed that women react more than men in both assertive and nonassertive modalities. In addition, our results confirmed the main effect of both sex and gender roles on students' assertive and nonassertive reactions to SH in academia.

Conclusion: Educational programs about SH may prove useful in preventing its occurrence. Gender equality plans in academia can improve a nonsexist and safe environment for students. It is urgent to improve transparency and accountability of policies on the management of SH: academic institutions need to formulate a procedure to facilitate SH reporting, considering the sensitive balance of confidentiality and transparency issues. Support for the victims (social services, healthcare, legal representation, and advice concerning career/professional development) must be included.

KEYWORDS

sexual harassment reactions, university students, sex, gender roles, academia

Introduction

Sexual harassment (SH) may take many various forms from less explicit (e.g., verbal comments) to explicit forms (e.g., sexual abuse) (Fitzgerald et al., 1988; Gruber, 1992).

There is still a controversy on the definitions of SH and there is a lack of a definition that can be broad enough to understand the various characteristics and forms of the issue (Leitich, 1999).

Although no integrated definition of SH occurs (Hulin et al., 1996; Pina et al., 2009; Stockdale et al., 2014; Sabbag et al., 2018), there is clear unanimity about harassment being offensive, humiliating, and intimidating behavior which usually comprises the abuse of power given by the gender order of society and organizations (Cairns, 1997; Nicolson, 1997; Magley et al., 1999; Huerta et al., 2006; Cabras et al., 2018, 2022). Similarly, a behavior can be regarded as SH if it is undesirable or without the free approval of the victims. All the definitions agree on one fundamental issue that SH is, first of all, sexual in nature, illegal, unwanted, unwelcomed, and immoral behavior which determines serious outcomes for the victims.

In higher educational institutions, the issue of SH is gaining scientific attention and progressively becoming the focal point of academic debate (Taiwo et al., 2014) because it often denies or limits a student's ability to participate in or benefit from a university's education program (Karami et al., 2020). Within academic settings, SH has severe negative effects on students' physical or emotional wellbeing as well as on their ability to succeed academically (Hill and Silva, 2005; Huerta et al., 2006; Willness et al., 2007). A survey showed that approximately 12% of the students across 27 universities experience some form of nonconsensual sexual contact by physical force (Cantor et al., 2015). In the European context, a study revealed that 77% of women students experienced some form of SH in their academic life (Fasting et al., 2014). Different authors have shown that 59% of US women have experienced SH, and women with higher education are far more likely to say they have experienced harassment compared to less educated women (Karami et al., 2020). In a report by the US National Academies of Science, Engineering, and Medicine survey of academic environments, 50% of female faculty/staff and 20–50% of female students reported SH experiences (National Academies of Sciences, 2018). This report described different negative professional outcomes for both faculty and staff (e.g., important declines in work satisfaction and engagement and productivity) and students (e.g., dropping courses and classes or receiving lower grades) (National Academies of Sciences, 2018). SH has a tremendous impact on mental health, such as the development of anxiety and depression (psychological distress) and post-traumatic stress disorder (PTSD) symptoms, low self-esteem, and panic disorder (Jussen et al., 2019). SH can manifest also with psychosomatic manifestations such as nausea, fatigue, frequent headache, sleep problems, respiratory infections, weight management issues, and gastrointestinal problems (Thakur and Paul, 2017). A large body of reliable data demonstrates that experiencing SH, even at low levels of frequency and intensity, can lead to psychological wellbeing worsening and increments in psychological distress, including major emotional disorders. Although not every individual who is exposed to such experiences will develop symptoms, such reactions are more common than not—indeed, they appear to be the normative response (Fitzgerald and Cortina, 2017). Despite various studies on the nature, reasons, and effects of SH in the university environment, much is not known about the different forms of reactions to which individuals choose to respond to SH. In particular, the study of students' responses to SH is relatively unexplored in the Italian university context.

The ways individuals manage SH differ according to the focus and the type of response (Gutek and Koss, 1993). The focus of the response can be categorized as either self-focused that does not comprise the harasser or harasser-focused that involves the harasser, while the type of response refers to the amount of outside support the victims seek, and it takes the form of either a self-response that is with no use of outside resources or a supported response that requires the use of outside resources (Gutek and Koss, 1993). Magley (2002) emphasized that there is a multiplicity of responses adopted by the victims in a dynamic process that unfolds over time (Fitzgerald and Cortina, 2017).

The individual's response to SH can be categorized either as assertive or passive (e.g., seeking social support or ignoring the behavior) or as nonassertive or active (e.g., reporting an incident to an authority) (Gruber and Bjorn, 1986; Cochran et al., 1997). Empirical support for this categorization is demonstrated by the studies of Cortina and Wasti (2005), which proposed a multilevel model of coping with SH, identifying three distinct patterns of coping (i.e., detached (nonassertive), avoidant negotiating (nonassertive), and support-seeking (assertive), each of which reflected relatively greater or lesser use of various combinations of behavior [see Knapp et al. (1997) for an earlier description of similar categories].

Usually, individuals who are more accepting of SH are less likely to consider their experiences as serious and, consequently, respond less assertively (Cochran et al., 1997). However, the person's choice of responses to SH might vary in many aspects, specifically regarding gender (Russell and Trigg, 2004).

It is plausible to hypothesize that women and men may use dissimilar strategies to respond to SH, particularly if the gravity and incidence of their experiences are different. Research suggests that women are more likely to ignore the harassment, avoid the harasser (Benson and Thomson, 1982; Gutek, 1985; Gutek and Koss, 1993; Cochran et al., 1997), or deflect the harassment by joking or going along with it (Gutek, 1985). In academic settings, some studies have shown that the majority of women who are victims of SH do not respond assertively either

by directly confronting the harasser or reporting the harasser to a university institutional authority but instead respond rather passively to the harassment experience (e.g., abandoning the university place) (Rudman et al., 1995; Popoola, 2010; Arulogun, 2013).

As an additional gender-related aspect that may be linked to the responses of SH, it is important to examine gender roles. According to the schema theory proposed by Bem (1981), gender roles refer to behavioral systems and social roles that are seen as appropriate for women and men and include those essential emotions and feelings that are conventionally considered to represent what it means to be female or male.

Masculinity focuses on a variety of characteristics such as power, assertiveness, leadership, autonomy, and competitiveness. In contrast, femininity focuses on different characteristics such as empathy and emotional disposition that are typical aspects inverse to masculinity (Helgeson, 1994). These characteristics will lead masculine women and men to believe that they can control what happens to them and, therefore, face harassment through their acts or deliberately manage such behaviors (Russell and Trigg, 2004; Fischer, 2006). According to Bem's (1974), individuals who possess a high degree of both masculine and feminine traits are categorized as androgynous, which is the most adaptive gender feature. Moreover, individuals who manifest a decrement in both masculine and feminine traits are categorized as undifferentiated in this model. The relationship between gender roles and attitudes and reactions toward SH is not clear, as, in the literature, there are some equivocal results. Powell (1986) found that men with a high level of masculinity were less likely to view disturbing sexual remarks as SH compared to other men, while women with a high level of femininity were more likely to do so compared to other women; moreover, both men and women with high levels of femininity perceived slightly more actions as SH than did their counterparts. In the same direction, Russell and Trigg (2004) found that highly feminine men and women were less likely to tolerate SH compared to their less feminine peers. However, there have been some studies (Bursik, 1992; McCabe and Hardman, 2005; Bursik and Gefter, 2011) that did not find a relation between gender roles and perception and tolerance of SH. The purpose of this study was to explore sex and gender-role orientation differences as well as interaction effects between sex and gender-role orientation in response to an imagined sexual harassment.

It was hypothesized that female students would report more nonassertive reactions compared to male students (Rudman et al., 1995; Popoola, 2010; Arulogun, 2013). In addition, it is hypothesized that female and male students who are classified as feminine will report more nonassertive responses, whereas male and female students who are classified as masculine will report more assertive responses (Russell and Trigg, 2004; Fischer, 2006).

Materials and methods

Participants

Participants included 1,415 university students enrolled at the University of Cagliari (593 men, 41.9%, and 822 women, 58.1%) who completed a series of self-report measures approved by the local ethical review board for research. Participants' ages ranged from 18 to 67 years (M = 25.85; SD = 7.57).

Procedure

The battery of self-report scales was administered to students at the University of Cagliari, attending heterogeneous courses from the end of January 2019 to the first half of February 2019. An email was sent to the whole population of students with an invitation to fill in the battery. The scales were administered using Lime Survey, an online survey tool, and took approximately 15 min to fill in. According to the ethical standards Declaration of Helsinki (World Medical Association, 2001), participants were informed about all relevant aspects of the study (e.g., methods and institutional affiliations of the researchers) before they started to fill in the questionnaire. Importantly, they were apprised of their right to anonymity, to refuse to participate in the study, or to withdraw their consent to participate at any time during the study without fear of reprisal. Participants then confirmed that they had understood the instructions correctly, agreed to participate, and began filling out the questionnaire.

Measures

BEM Sex Role Inventory

To assess the gender roles, participants filled in the Bem Sex Role Inventory (Bem's, 1974; Italian version De Leo et al., 1985). This self-report instrument is composed of 60 items, evaluating personality characteristics (20 referring to traditional feminine features, 20 referring to masculine features, and 20 referring to neutral features). Each feature was rated by a seven-point Likert scale (1 = never true to 7 = always true). The scores in femininity and masculinity were obtained by computing the mean of the 20 items belonging to each scale (femininity M = 4.62, SD = 0.769, median = 4.65, Cronbach's alpha = 0.836; masculinity M = 4.39, SD = 0.829, median = 4.40, Cronbach's alpha = 0.859). Then, the median split procedure was applied referring to the median of the sample for femininity and masculinity scales; this practice, identified in the literature, allows to find a typological variable, defined as *gender role*, having four modalities:

- feminine (under the median on masculinity and above the median on femininity);

- masculine (under the median on femininity and above the median on masculinity);
- androgynous (above the median on femininity and masculinity);
- undifferentiated (under the median on femininity and masculinity).

Reactions to sexual harassment in academia questionnaire (RSHAQ)

We created a theoretically based questionnaire (refer to Appendix 1 in Supplementary material) to evaluate individuals' imagined responses to sexual harassment by adapting items used by other researchers (Matsui et al., 1995). Specifically, these items were intended to evaluate individuals' imagined reactions to sexual harassment ranging from nonassertive to assertive.

Nonassertive reactions, which focused on changing one's own behavior to modify the situation, were (a) speak about the abuse with family and/or friends, (b) speak about the abuse with colleagues, and (c) avoid the intimate situations with the abuser.

Assertive reactions, which focused on modifying the behaviors of the actor, were (a) break the silence about the hypothesized abuse (inverse of silence), (b) denounce the abuser to university organizations, (c) denounce the abuser to the police, and (d) report the abuse to university professors.

Participants were asked to respond to each item on a five-point Likert scale ranging from 1 (never) to 5 (always).

Statistical analyses

We calculated descriptive statistics and zero-order correlations, which are reported in Table 1.

To assess the degree to which the items used to assess the reactions to harassment they were intended to measure, Principal Components Analyses (PCA) with Promax rotation was used as the extraction method for all the analyses conducted on the 7 items. Scree plots were used to determine the number of factors that would be examined. In addition, the items in each factor also had to conform to our theoretical expectations for the factor to be included as a subscale in the analyses.

Finally, we conducted a 2 × 4 MANOVA with two between-subjects factors, namely, (1) sex measured on two levels (male/female) and (2) gender roles measured on four levels (feminine, masculine, androgynous, and undifferentiated) on the two dependent variables, including nonassertive and assertive reactions.

Results

Descriptive statistics and zero-order correlations are reported in Table 1.

PCA

The analysis was carried out on a sample of over 1,000 respondents, a number beyond which test parameters tend to be stable regardless of the participant-to-variable ratio. The Kaiser–Meyer–Olkin sampling adequacy measure attained fairly high values (Kaiser–Meyer–Olkin value = 0.755), demonstrating that communalities were high and the sample's correlation matrix was appropriate for the analysis to proceed (Mundfrom et al., 2005). When the 7 items used to assess imagined reactions to sexual harassment were analyzed, two factors emerged. The first factor (refer to Table 2), labeled as nonassertive reactions, was composed of the following reactions, confirming the theoretical conceptualization: (a) speak about the abuse with family and/or friends, (b) speak about the abuse with colleagues, and (c) avoid the intimate situation with the abuser.

The second factor (refer to Table 2), the assertive reactions, was composed of the following reactions: (a) break the silence about the hypothesized abuse (inverse of silence), (b) denounce the abuser to university organizations, (c) denounce the abuser to the police, and (d) report the abuse to university professors.

MANOVA. A 2 × 4 (sex × gender roles) MANOVA was conducted on the two dependent variables, namely, assertive and nonassertive reactions.

Inspection of the cell sizes for comparisons of sex by gender role revealed unequal cell sizes ranging from 83 to 240 participants (refer to Table 3).

TABLE 1 Means, standard deviations, skewness, kurtosis, and zero-order correlations between variables (N = 1,415).

	Mean	SD	SK	C	1	2	3	4	5	6
1. BEM_Masculine	4.392	0.818	−0.187	−0.037	1					
2. BEM_Feminine	4.621	0.758	−0.562	1.234	0.253**	1				
3. BEM_Neutral	4.275	0.552	−0.541	3.775	0.448**	0.654**	1			
4. Assertive Reactions	2.604	0.915	−0.115	−0.956	0.043	0.110**	0.070**	1		
5. Non-assertive Reactions	3.744	1.055	−0.913	0.337	−0.025	0.173**	0.061*	0.520**	1	

Notes. ** $p < 0.01$; * $p < 0.05$.

TABLE 2 Principal component analysis (PCA) of the reactions to sexual harassment.

Items	Factor 1 assertive reactions	Factor 2 non-assertive reactions
Silence	−0.871	
Denounce the abuser to the Police	0.813	
Denounce the abuser to University organizations	0.789	
Report the abuse to University Professors	0.516	
Speak about the abuse with family and/or friends		0.865
Speak about the abuse with colleagues		0.846
Avoidance of intimate situations with the abuser		0.648
Eigenvalues	4.68	1.13
Explained Variance	47.69%	16.15%

TABLE 3 Cell sizes of gender roles by sex.

Gender roles	Sex		Total
	Males	Females	
Feminine	86	212	298
Masculine	158	145	303
Androgynous	169	228	397
Undifferentiated	180	237	417
Total	593	822	1,415

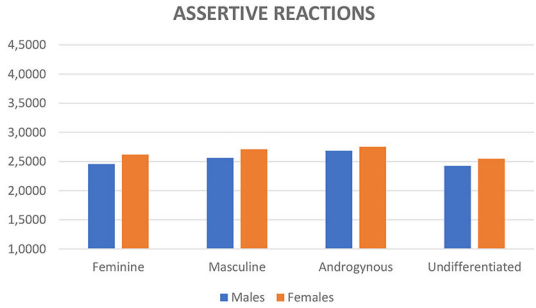

FIGURE 1
Mean scores of assertive reactions divided for sex and gender role according to the Bem (1974) theory.

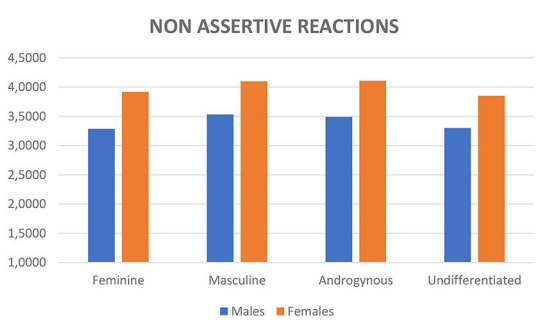

FIGURE 2
Mean scores of assertive reactions divided for sex and gender role according to the Bem (1974) theory.

Following the procedures recommended by Tabachnick and Fidell (2007), cell sizes were reduced *via* random deletion to the maximum ratio of 1:1.5. A total of 83 female participants were randomly removed from the Feminine Gender Role category. *Post-hoc* comparisons revealed a similar pattern of effects between the full data set and the data with randomly deleted cases.

The MANOVA revealed a significant main effect for sex [$F_{(2;1,323)} = 56.49$, $p < 0.001$, Wilk's $\Lambda = 0.92$, partial $\eta^2 = 0.08$] and gender role [$F_{(6;2,646)} = 3.42$, $p < 0.001$, Wilk's $\Lambda = 0.98$, partial $\eta^2 = 0.01$]. No significant interaction between sex and gender role was found. Mean scores are reported in Figure 1 for assertive reactions and in Figure 2 for nonassertive reactions.

Post-hoc comparisons using the Bonferroni correction on the four gender roles were conducted using the two separate measures of reactions to sexual harassment regarding assertive ones, the androgynous category reported significantly higher scores compared to feminine ($p = 0.031$) and undifferentiated ($p = 0.002$) and the masculine gender role was not significantly different from the other gender roles. When we considered the nonassertive reactions, the feminine category reported lower scores compared to the androgynous ($p = 0.017$) and the masculine ($p = 0.004$) gender role categories; moreover, the masculine category reported higher scores when compared to the undifferentiated category ($p = 0.029$); this latter category reported lower scores when compared to the androgynous category ($p = 0.006$). When we compared sex, women reported higher scores for both types of reactions ($F_{(1;1,331)} = 5.68$, $p < 0.05$, partial $\eta p^2 = 0.004$; $F_{(1;1,331)} = 101.33$, $p < 0.001$, partial $\eta p^2 = 0.071$, respectively.

Discussion

There is a wide collection of evidence that SH is a persistent phenomenon in academia, occurring daily, is prevalent and widespread, and has devastating professional and personal effects on the targeted person (Mansfield et al., 2019). A 2018 US National Academies of Sciences, Engineering, and Medicine (NASEM) report documented the painful experiences and

myriad effects of unwanted sexual attention, gender harassment, and sexual coercion. The report also emphasizes that women of color and gender nonconforming women face multiple, intersecting forms of harassment. In sum, the literature suggests that harassment is still present and pervasive in academia. However, the existing literature on SH and sexism in academia is limited in scope, and many studies have relatively small sample sizes. There is a need to better understand the SH experiences and patterns in academia (Seto, 2019), especially the coping mechanism adopted by the victims and the institutional responses to SH reporting. Responding to the harassment is a process and not a single act with an expiring date; there are numerous ways in which victims attempt to manage their situation, of which formal reporting is typically the last resort.

Our results showed that, contrary to our hypothesis (Rudman et al., 1995; Popoola, 2010; Arulogun, 2013), women react more than men in both assertive and nonassertive modalities. It is plausible that considering the SH phenomenon as predominantly targeting girls and adult women, those react more than their male peers in both ways, assertive and nonassertive, because they are called to face the problem more frequently compared to men with a significant potential burden of reacting in the appropriate way to stop the abuse. As reported in a seminal study by Fitzgerald et al. (1995, p. 118), "legal proceedings... in practice if not theory, hold the victim responsible for responding 'appropriately'"... "placing the burden of non-consent on the victim." The authors highlighted that, up to that point in time, frameworks for understanding women's responses to SH were typically based on an assumption that reactions were typically viewed as simply more or less assertive, placing all the responsibility on the victim. Recent literature argued that the answers and services provided by the universities, namely, organizational and institutional factors, play a key role in the complex and dynamic experience of reporting the SH in a context that potentially could operate secondary victimization. In an effort to better understand the SH experiences of women in science, technology, engineering, and mathematics (STEM) fields, the National Academies Committee on the Impacts of Sexual Harassment in Academia commissioned the Research Triangle Institute (RTI) to conduct a series of interviews (Lindquist and McKay, 2018). The results showed that women had numerous ways of coping with SH, e.g., adopting internal coping mechanisms, like minimizing or normalizing the incidents (e.g., trying to ignore or laugh it off); facing the harasser; engaging in mindfulness, spiritual, and self-healing activities or in exercise or physical activity; and staying focused on their careers (Lindquist and McKay, 2018). Women also reached out to friends and family, which was considered almost universally to be a positive choice. However, reactions from colleagues turned out to be a mixed bag for these women, encompassing supportive and emphatic answers and, at the same time, the second victimization: they were not believed or ridiculed. Results from the 2016 ARC3 survey at the University of Texas System confirm that students have very low reporting rates, with only 2.2% of all students who experienced SH reporting it to the institution and 3.2% disclosing the experience to someone in a position of authority at the institution. In a study on graduate students, only 6.4% of those who had been sexually harassed reported the incident (Rosenthal et al., 2016). As a coping mechanism, formal reporting for targets is the last resort: it becomes an option only when all others have been exhausted. Cortina and Berdahl (2008, p. 484) motivated the reluctance to use formal reporting by the "fear of blame, disbelief, inaction, retaliation, humiliation, ostracism, and damage to one's career and reputation." These fears are justified because reporting processes often bring few benefits and many costs to the targets. In particular, students are often reluctant to start the formal reporting process with their campus because of fear of reprisals, retaliation, bad outcomes, not knowing adequately formal procedures, concerns about confidentiality issues, and fear that the institutional process will not serve them or even will damage them (Pappas, 2016). Recently, Hershcovis et al. (2021) in an attempt to explain the social dynamics of SH silencing (vs. reporting) of the violence affirmed that nonassertive reactions are safer in academia because universities' network compositions and belief systems serve to socially compel network silence, which enables SH to persist. Hershcovis et al. (2021) theorized the reactions to SH as a network phenomenon, introducing the concept of network silence around SH, defined as having three components, namely, being silent, silencing, and not hearing. The authors cast a wide net on the scope of responsibility for silence beyond victims to members of the social network, witnesses, and authority figures comprised, highlighting how silence is socially generated by examining the network elements that coerce and support silence. Using punishments, rewards, reinforcements, and mimicry, network members learn to not report, to silence each other, and to not hear when it comes to SH, making these three subcomponents of network silence form a mutually reinforcing pattern. The authors proposed potential explanations for the female students of our sample who showed higher scores in assertive reactions. Concerning the influence of the second individual variable considered, i.e., gender role, this has been more equivocal (Bursik and Gefter, 2011) with some researchers reporting significant interactions of gender and gender role in perceptions of SH (Powell, 1986; Russell and Trigg, 2004), while others report nonsignificant main and interaction effects for gender role on perceptions of SH in academic contexts (Bursik, 1992). Our results confirmed the main effect of both sex and gender roles on students' assertive and nonassertive reactions to SH in academia but their interaction was not confirmed such as in seminal research on the topic investigated (see Bursik, 1992). Although the perception of gender roles may play a subtle role, its impact on the perception of SH has not received extensive empirical support in recent times.

This study has some limitations: the study is conducted with a cross-sectional research design, which prevents the formulation of any causal inferences. Longitudinal or experimental studies testing the existence of causal relations are a challenge for future research. Research on informal and formal reporting mechanisms should be investigated further and the scales used to assess the reactions of SH have to be refined in future studies to capture more broadly the complex experience of abuse reporting, especially when the abuse comes from a person in a position of power over the victim.

Conclusion, policy implications, and future directions

Sexual harassment is a diffused problem that tends to be underestimated in research centers and universities. However, recent analyses and reviews, undertaken among others in the context of European Union (EU)-funded structural-change projects, have revealed the pressing need for action against this problem (see European Institute for Gender Equality, 2016). Recent literature showed that organizational and institutional factors play a key role in the experience of reporting the abuse in a context like academia in which SH potentially has been evaluated as a norm and which could operate as secondary victimization. Educational programs about SH may prove useful in preventing its occurrence.

In the context of the EU, many educational programs were developed that proposed some useful guidelines and recommendations implemented to face SH with a focus on the institutional role (see European Institute for Gender Equality, 2016 for a list of guidelines developed in France, Spain, and the UK). In any case, it should be clear that abuses in any form, neither physically nor psychologically, are not tolerated. Gender equality plans in academia (Aru et al., 2020) can improve a nonsexist and safe environment for students. It is important to create diverse, inclusive, and respectful environments and move beyond legal compliance to address culture and climate. SH needs to be faced as a problematic issue that requires institutional leaders to engage with and listen to students and other campus community members. It is urgent to improve transparency and accountability of policies on the management of SH: academic institutions need to formulate a clear, easily accessible, and consistent procedure to facilitate SH reporting, considering the sensitive balance of confidentiality and transparency issues. It is also essential to provide support for the victims (e.g., social services, healthcare, legal representation, and advice concerning career development). Funders should support the following critical research areas: SH of women in underrepresented and/or vulnerable groups, including women of color, disabled women, immigrant women, and sexual- and gender-minority women. Mechanisms for protecting victims from retaliation should be developed alongside approaches for mitigating the negative impacts experienced. The social construction of SH needs to be expanded to include interactions that do not necessarily involve physical contact or assault. The inclusion of specific definitions and examples of both overt and more subtle forms of sexual harassment behavior may be necessary for men and women to identify this type of behavior as problematic.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving human participants were reviewed and approved by Ethical Committee of University of Cagliari Prot. No. 0000895. The patients/participants provided their written informed consent to participate in this study.

Author contributions

Material preparation and data collection were performed by CCab, EC, CCas, and LR. Statistical analyses were performed by OM, CS, and MA. The first draft of the manuscript was written by CCab, CS, OM, and MA. All authors commented on previous versions of the manuscript. All authors contributed to the study's conception and design. All authors read and approved the final manuscript.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.949103/full#supplementary-material

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The role of women's resources in the prediction of intimate partner violence revictimization by the same or different aggressors

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The literature studying the characteristics associated with revictimization in Intimate Partner Violence (IPV) is heterogeneous and inconclusive. The absence of studies on the role of the emotional variables of the victims and the failure to distinguish revictimization by the same or different aggressors are two of the main limitations in this area of research. The aim of this work was to study the relative contribution of the material, social, and emotional resources available to IPV victims in predicting revictimization by the same or different perpetrators. The sample consisted of 290 women registered in the city of Madrid who had filed at least one police report for intimate partner violence. The material resources of the victims were evaluated through their level of monthly income and employability status, the social resources through perceived social support, and the emotional resources through emotional regulation and coping strategies. Hierarchical multinomial logistic regression models were estimated to predict single-offender victimization (SRV), same-offender revictimization (VSRSA), and multiple-offender revictimization (VSRDA). The results revealed that: (1) differentiating between revictimization by the same and different aggressors improved the fit of the model by 50.8% compared to when only differentiating between victimized and revictimized women; (2) material resources had no significant weight in the prediction of any type of revictimization; (3) SRV women had more social support than VSRDA women (ExpB=1.027; $p<0.011$); (4), those victims who had made several reports to the authorities of violence by different aggressors (VSRDA), had worse emotional regulation than those victims who had made a single report to the authorities (VSRs; ExpB=2.934; $p<0.026$); and (5) VSRDA obtained the worst mental health indexes and they used more coping strategies based on positive reappraisal than the VSR women (ExpB=0.863; $p<0.009$) and those victims with several reports by the same aggressor (VSRSA; ExpB=0.891; $p<0.028$). These results show that being a victim of several episodes of intimate partner violence by different aggressors should be understood as a form of revictimization of great severity associated with worse emotional regulation and less social support.

KEYWORDS

intimate partner violence, revictimization, women, emotional resources, social resources, material resources

Introduction

Intimate partner violence (IPV) is a complex phenomenon that has become a major public health problem [World Health Organization (WHO), 2013]. Women victims of IPV often experience psychological consequences, such as post-traumatic stress disorder (PTSD), depression, anxiety, substance use disorders, eating disorders, somatic complaints, and suicidal tendencies (Iverson et al., 2013). In addition, having suffered violence on one occasion increases the risk of being assaulted again by the same partner and also in future relationships. Specifically, between 22.9 and 56% of women who experience gender-based violence had already had previous histories of victimization in previous intimate partner relationships (Ørke et al., 2021). It has been shown that the consequences of re-experiencing abusive situations at the hands of a partner or ex-partner are more severe and long-lasting than when there is a single episode of violence, which more negatively affects the victim's ability to recover psychologically and emotionally (Kuijpers et al., 2011; Iverson et al., 2013).

Most studies on revictimization focus on analyzing the variables associated with recidivism in perpetrators and have tended to ignore the factors associated with the victims for fear of blaming them (Orke et al., 2018). However, knowing which strategies and resources are associated with revictimization by the same or different partners could help to enhance a more active and effective coping mechanism with situations of violence, without, in any case, discharging the aggressor of his responsibility for the violent behavior.

In this sense, the normative resource theory states that, in couple relationships, people with greater access to material, social, and emotional resources will be able to exert greater positive control over their partners (Crosbie-Burnett and Giles-Sims, 1991). From this point of view, women who are more economically, emotionally, and socially dependent on their partners will be more likely to be revictimized, while those who have more of the three types of resources will be in a more favorable situation to avoid revictimization by the same or different partners (Goodman et al., 2005).

This theory has been empirically contrasted in numerous studies with respect to material resources. Thus, socioeconomic status has been shown to be a strong protective factor in IPV revictimization (Coolidge and Anderson, 2002; Hirschel and Hutchison, 2003; Caetano et al., 2005; Person, 2018). However, employability although less studied and with less clear results, also seems to have a mainly protective effect against revictimization (Crandall et al., 2004; Hayes, 2018; Ørke et al., 2021). Social or interpersonal resources, mainly assessed through the perceived social support of IPV victims, have also frequently been included among the predictors associated with revictimization in gender-based violence and in most studies they are given a mainly protective role (Goodman et al., 2005; Valentine et al., 2016; Ogbe et al., 2020; Ørke et al., 2020). Finally, with respect to emotional resources, there is a line of research which has focused on exploring the victims' use of both emotional regulation and coping strategies in the face of stress to mitigate the consequences of IPV (Crowe and Murray, 2015; Puente-Martinez et al., 2021). Even so, the evidence that has analyzed emotional regulation and coping processes in the population of IPV victims is scarce and heterogeneous when compared with the high number of studies conducted to examine the role of material and interpersonal resources (Keeling et al., 2016; Orke et al., 2018).

The study of coping strategies has classically followed an inter-individual approach that involves analyzing the different strategies grouped into the coping styles that the individual may use across different situations and stressors (Lazarus and Folkman, 1984; Cohen, 1987; Waldrop and Resick, 2004). From this approach, "engagement" vs. "disengagement" coping styles are differentiated (Lewis et al., 2006). The first is usually defined as proactive ways of coping with problems, it is associated with a healthy style of coping with stress and usually includes strategies, such as focusing on the problem, cognitive reappraisal, or emotional expression (Iverson et al., 2013). The second, on the contrary, refers to more passive coping strategies, it is negatively associated with healthy stress coping styles and usually includes avoidance strategies, negative self-focus or delusional thinking (Sandín and Chorot, 2003; Iverson et al., 2013). When transferred to the field of IPV, it has been recommended that women victims be trained in the use of "engagement" strategies which would provide them with a protective role against revictimization, while passive strategies would favor revictimization (Iverson et al., 2013; Puente-Martinez et al., 2021).

In contrast to the previous approach, it is currently considered more appropriate to analyze each coping strategy separately, examining their functionality in a given context and population, rather than grouping them into watertight and general categories that underestimate the complexity of the reality experienced by women victims of IPV (Lewis et al., 2006; Sullivan et al., 2010; Puente-Martinez et al., 2021). A review on coping in female victims of domestic violence supports the use of an intra-individual approach in the study of coping because coping tends to vary as a function of the characteristics of the stressful situation (Waldrop and Resick, 2004).

In accordance with the above, it is considered that the situational and personal variables that model the functionality

of the different coping strategies have a short trajectory of study (Meyer et al., 2010). It seems that the level of perceived control over the situation, as well as the contextual factors that determine the level of change in the situation, are factors which have a great impact on the choice of the coping strategy used and its functionality (Kacot, 2003; Puente-Martinez et al., 2021). In women victims of IPV, the cognitive avoidance strategy, understood as continuous attempts to keep the mind busy, spending time away from home, or distracting themselves with another activity, is frequently encountered, arguing that women resort to it in the face of a lack of controllability over the violent situation (Walsh et al., 2011; Pérez-Tarrés et al., 2017; Ozturk et al., 2019). However, the use of this strategy has been shown to be moderated by other contextual factors such as the duration and frequency of violence (Waldrop and Resick, 2004; Pérez-Tarrés et al., 2017). Specifically, it has been observed that at the beginning of the relationship women use more problem-focused strategies aimed at dialoguing, confronting, or understanding the situation (Miracco et al., 2010; Pérez-Tarrés et al., 2017). In the absence of contingency between their behavior and the presence or not of violence, the locus of control becomes increasingly external to the victim, corresponding with an increase in the use of avoidance strategies to reduce any type of confrontation. As the relationship progresses and the abuse continues, conformist attitudes and feelings of guilt and hopelessness increase, which are also associated with a greater presence of PTSD symptomatology in IPV (Iverson et al., 2013; Pérez-Tarrés et al., 2017). At this point, some authors claim that coping strategies based on a positive reappraisal of the situation become a key for the adaptation to the situation of violence. Thus, Zink et al. (2006) state that when faced with a situation of total uncontrollability, "women change the concept they have of themselves, their partners and their relationships to learn to live with the abuse" (p. 644). This evolution of coping strategies as the relationship progresses fits with learning model of Walker (1979) to explain what the use of different coping strategies in IPV depends on. According to this author, the choice of certain strategies in the present is the result of those behaviors being useful in the past, so that women who use strategies that prove consistently ineffective over an extended period of time develop a state of learned helplessness in which even escape reactions are blocked. Unfortunately, these results have only been analyzed in a limited number of studies which have mainly been descriptive and qualitative.

From this point of view, the functionality of coping strategies is completely linked to contextual and personal factors and points to the limited usefulness of predetermined divisions of coping strategies into global dimensions of engagement and disengagement. Given that abusive relationships involve specific circumstances in which the use of strategies *a priori* considered "healthy" may be a risk factor in the maintenance of violence (Goodman et al., 2005), it is likely that the use of an intra-situational approach that takes into account the personal and situational characteristics of the victim is the most appropriate way to study the role of coping strategies in the field of IPV revictimization.

Regarding emotional regulation, which is the second emotional resource considered of interest in the field of IPV study, the evidence for this is much more limited than for coping strategies (Muñoz-Rivas et al., 2021). The scarce literature available shows that women with IPV experiences have greater difficulties in accepting and acknowledging their emotions (Ullman et al., 2009) and that revictimization is associated with weaker emotional regulation strategies (Classen et al., 2005). More specifically (Muñoz-Rivas et al., 2021) found that there was an interaction effect between the type of revictimization suffered, either by the same aggressor or by different aggressors, and emotional regulation in predicting PTSD symptomatology in women victims of IPV. Thus, in the group of women revictimized by multiple aggressors, the difference in PTSD symptomatology between the group with good and poor emotional regulation was significantly different from the differences found in the groups of women revictimized by the same aggressor, and those who had not been revictimized. These results are congruent with the multiple studies that in the last decade have presented emotional regulation as a determinant factor in the maintenance of multiple clinical problems (Gross, 2015; Seligowski et al., 2015; McRae and Gross, 2020) and, moreover, point out that its role in IPV may be especially important when violence is more frequent and sustained over time.

Current study

In this paper, the different types of resources are studied together to examine the relative contributions of each in predicting different forms of revictimization in IPV. A precedent for the present study can be found in Goodman et al. (2005) who provided empirical support for normative resource theory by analyzing the predictive role in revictimization of each type of resource in the presence of the others. To assess the victims' material resources, they used socioeconomic status and employability, for social or interpersonal resources they measured social support, and for emotional resources they assessed quality of life and passive and confrontational coping strategies in the face of violence. In their results they found that only social support was a protective factor for revictimization and that confrontation strategies functioned as a risk factor, whilst the other predictors of the model were insignificant.

The present study is similar to that of Goodman et al. (2005) with respect to how material and social resources are considered, although it differs notably in the way in which emotional resources are considered, as well as in the way in which revictimization is assessed. Firstly, emotional resources are assessed through the level of emotional regulation and through coping strategies using standardized scales. Emotional regulation is considered to be a construct that more accurately

and concretely represents the emotional resources of victims than their quality of life, which can be understood more as an outcome. Similarly to Muñoz-Rivas et al. (2021), the aim is to test whether belonging to more or less efficient emotional regulation groups discriminates in the risk of revictimization. Regarding coping strategies, following an intra-personal approach, the aim is to avoid resorting to the grouping of coping strategies into generic categories, i.e., engament vs. disengament, and to evaluate the role of some of the main coping strategies related to IPV separately. Attending to the importance of considering the controllability, duration, and frequency of violence for the analysis of the functionality of coping strategies, the aim is to check whether, depending on the type of revictimization (developed below): (1) avoidance strategies are still the most used, (2) whether the increase in feelings of hopelessness, guilt, and learned helplessness means that women tend to focus on negative aspects (Pérez-Tarrés et al., 2017) or, if on the contrary, following the findings of Zink et al. (2006) women tend to positively re-evaluate the situation as a coping strategy in the face of the perceived impossibility of escape from violence.

Secondly, this study will take into account whether revictimization occurs at the hands of the same or different aggressors, as this has been shown to be a relevant moderating variable. Those women revictimized by multiple aggressors are more likely to have greater clinical symptomatology, to have suffered abuse in childhood, to have an avoidant attachment pattern and to have problems of addiction to illegal drugs (Kuijpers et al., 2011; Orke et al., 2018). Moreover, attending to the importance of context in assessing the role of emotional resources, this differentiation may give greater precision to the interpretation of the results.

The objectives are as follows:

- To test the role of material, social, and emotional resources in the prediction of revictimization. It is hypothesized that emotional resources, despite their lower representation in the literature, will have a similar or greater weight than social and material resources.
- To incorporate emotional variables in the analysis of the results. It is hypothesized that emotional regulation will play an important role in the study of revictimization as it does in many other fields.
- To test the role of different types of revictimization. It is hypothesized that revictimization by different aggressors will lead to a higher level of vulnerability in the victims.
- To analyze the role of specific coping strategies in the context of different types of revictimization. Specifically, the strategies of avoidance, positive reappraisal, and negative self-focus will be evaluated and it is hypothesized that having suffered revictimization at the hands of the same or different aggressors will influence the type of specific coping strategy employed by the victim.

Materials and methods

Participants

The study sample consisted of 290 women victims of IPV who were included in the Sistema de Seguimiento Integral de los casos de violencia de género (VioGen) of the Spanish Ministry of the Interior belonging to the Community of Madrid since 2014. Forty-eight women were excluded from the analysis for reasons explained in the procedure section, which reduced the final sample size to 242 participants.

Procedure

This study was developed in collaboration with the Secretary of State for Security of the Spanish Ministry of the Interior, which is responsible for the VioGén System that registers any complaint made by a woman regarding physical, sexual, or psychological IPV at the national level. For each complaint, the victim's data are recorded and information is attached regarding her socioeconomic context, history of victimization and the corresponding legal and judicial assessment.

For research purposes, the participants in the study were selected according to the following inclusion criteria: (a) being an active case after filing a complaint within the VioGén System because of physical, sexual, or psychological IPV; (b) having a court sentence for police protection measures; and (c) being of legal age. In addition, in order to have all the profiles of victims of IPV represented according to the number of times they have filed a complaint and the multiplicity of aggressors the following were selected:

a. Victims of a single episode of gender-based violence (*victims single report, VSR*): women victims included in VioGen since 2014 who, after a single report, have not filed any subsequent report. Those women who were interviewed as victims of a single episode of gender-based violence, but in the interview stated that they had suffered other episodes of violence from the same or different partners that they did not report were excluded from the analyses.
b. Victims of several episodes of gender-based violence perpetrated by the same partner (*victims with several reports by the same aggressor*, *VSRSA*): female victims included in VioGen since 2014 who have filed several reports by the same aggressor.
c. Victims of multiple episodes of gender-based violence perpetrated by multiple partners (*victims with several reports by different aggressors, VSRDA*) female victims included in VioGen since 2014 who have filed multiple reports by different aggressors.

Once the extraction was performed, the police officers were asked to inform the victims about the possibility of collaborating in the study. The women who agreed to participate were contacted

by telephone to obtain their voluntary consent to participate. The interviews lasted approximately 3 h and were conducted at the place of preference of the participants, usually their home. After signing the informed consent form, the interview was structured and guided by a standard evaluation protocol. The procedure was approved by the Research Ethics Committee of the Universidad Autónoma de Madrid (CEI-941720).

Instruments

- An *ad-hoc* questionnaire was developed to collect psychosocial information on the victims: age, nationality, marital status, educational level, income level, employability, and time elapsed since the complaint was filed and the victim's estimated probability of being assaulted again by another partner in the future.
- Emotional Processing Scale (EPS-25; Baker et al., 2010) consists of 25 items organized into five factors (suppression, avoidance, unregulated emotion, impoverished emotional experience, and signs of unprocessed emotions) that allow the calculation of an overall score. Each item is rated on a 10-point Likert-type scale (0 "completely disagree" to 9 "completely agree"). The range of possible total scores was from 0 to 225, with a higher score indicating lower emotional regulation ability. In the present study, the reliability estimated by Cronbach's alpha coefficient was 0.954 [95% CI = 0.945–0.963] and the same value was used for the Omega coefficient. In the subscales, the values ranged between 0.79 and 0.896 for Cronbach's alpha coefficient and between 0.809 and 0.872 for the Omega.
- Post Traumatic Stress Disorder (PTSD) Revised Symptom Severity Scale (EGS-R) is a modified and updated version of the EGS used to assess the severity of PTSD symptoms based on the DSM-5 diagnostic criteria (Echeburúa et al., 2016). It consists of 21 items rated on a four-point Likert-type scale (0 "Not at all" to 3 "Five or more times per week/much"). It analyzes the factors reexperiencing, behavioral/cognitive avoidance, cognitive alterations and negative mood, and increased physiological reactivity. The higher scores equate to a greater severity of symptomatology and in this study it was used, together with the DASS, to assess the level of adjustment of the different types of victim. With the present sample, the reliability estimated by Cronbach's alpha coefficient was 0.909 [95% CI = 0.89–0.925] and 0.908 on the Omega coefficient for the total scale. In the individual scales, the alpha coefficients took values between 0.747 and 0.883 and the Omega coefficients between 0.827 and 0.869.
- An abbreviated version of the Depression, Anxiety, and Stress Scales (DASS-21). Specifically, the Spanish version validated by Antúnez and Vinet (2012) was used. The DASS-21 assesses in a self-reported manner the presence and intensity of the affective states of depression, anxiety and stress in the latter. It has a total of 21 items, with four response alternatives in a Likert format, ranging from 0 ("It does not describe anything that happened to me or I felt during the week") to 3 ("Yes, this happened to me a lot, or almost always"). Each subscale has seven items and its total score is calculated with the sum of the items belonging to that subscale, ranging from 0 to 21 points. The Depression scale assesses dysphoria, meaninglessness, self-criticism, lack of interest, and anhedonia. The Anxiety scale considers subjective and somatic symptoms of fear, autonomic activation, situational anxiety, and subjective experience of anxious affect. The Stress scale assesses persistent non-specific activation, difficulty relaxing, irritability, and impatience. Cronbach's alpha for the total scale in the present sample was 0.965 [CI: 0.958–971]. In the depression scale, the value obtained was 0.924 [CI: 907–938], 0.902 [CI: 882–920] for the anxiety scale, and 0.908 [CI: 0.888–0.925] in the stress scale. The Omega coefficients were 0.966, 0.926, 0.907, and 0.910, respectively.
- Multidimensional Scale of Perceived Social Support (EMAS) adapted to Spanish by Ruiz Jiménez et al. (2017). This is a 12-item instrument that collects the levels of social support perceived by friends, family, and relevant people to whom it is administered. Each item has seven alternatives, where value 1 means "Strongly disagree" and value 7 "Strongly agree," so that the total score on the scale ranges from 12 to 84 points. The higher scores indicate greater perceived social support. In the total scale, Cronbach's alpha was 0.918 [CI: 901–933] and the Omega coefficient took a value of 0.891. In the three subscales, values between 0.842 and 955 were obtained for Cronbach's alpha and between 0.847 and 0.954 for the Omega coefficient.
- Stress Coping Questionnaire (CAE) validated in Spanish by Sandín and Chorot (2003). The theoretical justification provided has led to the selection of the avoidance scale for this study, as it is the most used coping strategy in IPV (Ozturk et al., 2019); the negative self-focus scale, for encompassing negative coping dimensions, such as guilt, hopelessness, and resignation associated with the maintenance of violent situations (Pérez-Tarrés et al., 2017); and the positive reappraisal scale, for its key role in the face of learned helplessness developed in revictimized women (Zink et al., 2006). Each subscale is made up of six items that participants evaluate on a scale of 0–4 according to the frequency with which they made use of the coping strategy raised to deal with the violence. Some examples of items from the avoidance scale are: (1) "When the problem came to my mind, I tried to concentrate on other things," (2) "I turned to work or another activity to forget about the problem," and (3) "I went out to the movies, to dinner, for a walk, etc., to forget about the problem." In the case of the positive reappraisal scale, some examples of its items are: (1) "I tried to focus on the positive aspects of the problem," (2) "I understood that things other than the problem were important to me," and (3) "I personally experienced that every cloud has a silver lining."

Finally, the negative self-focus scale is made up of items such as: (1) "I convinced myself that no matter what I did, things would always go wrong" (2) "I did nothing concrete since things are usually bad," (3) "I understood that I was the main cause of the problem," and (4) "I felt helpless and unable to do anything positive to change the situation." Reliability analyses estimated a Cronbach's alpha coefficient of 0.66 [CI: 0.59–0.724] for the avoidance scale, a value of 0.754 [CI: 0.70–0.801] for the negative self-focus scale, and 0.63 [CI: 0.55–0.701] on the positive reappraisal scale. The Omega coefficients were 0.657, 0.749, and 0.621, respectively. The reliability coefficients obtained are somewhat low, but acceptable and consistent with those obtained in the original validation article, in which the alpha coefficients for the three scales ranged from 0.64 to 0.76 (Sandín and Chorot, 2003).

Statistical analysis

Initially, the internal consistency of the scales used in the study was analyzed using the Alpha and Omega coefficients. Coefficients above 0.60 were considered acceptable (Taber, 2018). Descriptive analyses were performed for sociodemographic variables and for the different types of resources, and one-factor ANOVAs were performed to contrast whether there were differences in means between the three types of victims in the resources assessed and in their clinical adjustment. Hierarchical binary logistic regression models were estimated to determine the weight of each resource in predicting whether or not women had been revictimized. The types of resources were entered in blocks using their recognition in previous literature as a criterion: firstly, material resources, secondly, social resources, and lastly, emotional resources. The final model was carried out by means of a hierarchical multinomial regression analysis which, with respect to the binary logistic regression analysis, allows prediction of category membership of a polytomous variable with more than two categories. This model was used to predict membership in the VSR, VSRSA, and VSRDA groups on the basis of the resources evaluated. To facilitate the interpretability of the results, taking (Muñoz-Rivas et al., 2021) as a reference, in the regression models, the variable emotional regulation was dichotomized forming two groups divided by the median that differentiated between women with high and low emotional regulation. The means between the two groups differed significantly ($T = -25.98$; $p < 0.0001$; 95% CI of difference = −4.436 to −3.811).

In order to be able to affirm that the multinomial regression models work correctly, the assumptions of independence of the predictor variables, collinearity, dispersion proportional to the mean, and linearity between the independent variables were tested (Pardo and Ruiz, 2012). In this study, no assumption was violated. The assumption of independence did not need to be checked because, as this was a retrospective study, there was no sequential data collection. Regarding the diagnoses of collinearity, high tolerance levels (between 0.738 and 0.880) and low variance inflation factors (between 1.13 and 1.36) were obtained for all variables, which ruled out problems due to excessive collinearity between predictors. The scale parameter to evaluate the proportional dispersion of the mean was 1.09, which indicates the absence of overdispersion and underdispersion, being a value very close to 1. Finally, polynomial analyses were performed to evaluate what type of trend relationship existed between the logit of the dependent variable and the independent variables. For all predictors, only the linear trend was significant, except for the variables positive reappraisal and avoidance strategies, where neither the linear nor the quadratic trend was significant, so that the null hypothesis of non-linearity could not be rejected.

Results

Descriptive analysis showed that the mean age of the women was 37.88 years, 65.8% were of Spanish origin, 58.9% of the participants had a high school or university education, 27.8% had vocational training, 12.9% had primary education, and less than 1% had no education. A total of 33.5% were women victimized on a single occasion, 41.7% were victimized on more than one occasion by the same aggressor, and 24.8% were victimized more than once by different aggressors.

Analyses to assess whether the sociodemographic variables age, level of education, and time elapsed since the complaint and the expectation of being victimized again differed among the three types of victims showed statistically insignificant relationships, except for the variable that recorded whether the victim considered that she would probably or surely be assaulted again by another partner in the future. Differences were found between the group of women revictimized by multiple aggressors (VSRDA) and the group of women victimized on one occasion (VSR) and revictimized by the same aggressor (VSRSA). Specifically, 39.7% of the VSRDA women answered that they would probably/surely be assaulted again compared to 22.4% of the VSRSA women ($p < 0.042$) and 17.5% of the VSR ($p < 0.008$). Table 1 shows descriptive statistics for all variables assessed.

We analyzed whether there was a relationship between the different types of resources and sociodemographic variables. It was found that educational level was positively associated with income level ($r = 0.390$; $p < 0.01$) and with social support ($r = 0.144$; $p < 0.05$), and positive reappraisal strategies were negatively associated with victim's age ($r = -0.190$; $p < 0.001$).

Analyses to assess the clinical adjustment of the different types of victims showed that VSRDAs differed significantly from VSRs and VSRSAs in post-traumatic symptomatology as well as in the stress, anxiety, and depression scales. Thus, they presented a higher level of PTSD, anxiety, stress, and depression symptomatology than the other two groups. In contrast, no differences were found between the VSR and VSRSA groups for any of the scales (Table 2).

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TABLE 1 Descriptive statistics.

	Average/%	Deviation
Age	37.88	10.671
Level of education		
No education	0.4%	
Primary	12.9%	
Vocational Training	27.8%	
Baccalaureate/University	58.9%	
Nationality		
Spanish	65.8%	
Rest	35.2%	
High self-reported likelihood of revictimization by another offender		
VSR	17.5%	
VRSA	22.4%	
VSRDA	39.7%	
Monthly income		
Up to 450 €.		
From 451 to 600 €	13.6%	
From 601 to 1,000 €	25.6%	
From 1,001 to 1,500 €.		
From 1,501 to 2000 €	6.6%	
From 2001 to 3,000 €.	4.1%	
More than 3,000 €.	1.2%	
Employability		
Works full time/part time	64.9	
Does not work	35.1	
Positive CAE reassessment	14.9312	4.78572
CAE avoidance	13.8095	4.90502
Negative self-focusing CAE	13.6244	5.61323
Emotional regulation EPS	3.5851	2.40153
Global_Support	66.1342	17.29826

A hierarchical binomial logistic regression analysis was performed (Table 3) in which the predictor variables included those corresponding to the estimates of the different types of resources. The dichotomous variable *having been revictimized* (Yes/No) constituted the dependent variable. The resulting model was significant ($p < 0.023$) at a significance level of 0.05 and the goodness-of-fit test indicated that the model was able to explain 12.4% of the variance of the dependent variable (Nagelkerke's corrected $R^2 = 0.124$) when including all variables in the third step. In the first step, none of the material resources variables was significant. In steps 2 and 3, only social support was a significant predictor with an effect size of 0.97 ($p < 0.021$) and an inverse relationship with respect to membership in the group of revictimized women, such that greater social support corresponded to a lower risk of revictimization. None of the emotional resources introduced into the model in step 3 proved significant.

After the binary logistic regression analysis, a hierarchical multinomial regression analysis was performed including the same predictor variables, but differentiated according to the type of revictimization suffered (same aggressor vs. different aggressors), to check whether the model improved and provided any new information by differentiating between the different types of revictimization (Tables 4, 5). The analysis showed that the model remained significant at a significance level of 0.01 ($p < 0.005$) and increased the percentage of variance explained to 19% (Nagelkerke's corrected $R^2 = 0.187$), an increase in variance of 50.8% over the previous model. Following the binary model procedure, current income, and the victim's employability (Yes/No) were introduced in the first step as proxies for material resources but neither variable was found to be significant. In the second step, material resources were maintained and social support was introduced, which was positively related to membership in the group of VSR women, taking as a reference the VSRSA group. That is, with an effect size of 1.027 ($p < 0.011$), the VSR women tended to have greater social support than VSRDA women. Finally, in the third step, emotional resources were introduced, and significant results were found for emotional regulation variables and positive reappraisal coping strategies. Specifically, women assaulted on a single occasion were 2.93 times more likely to belong to the effective emotional regulation group than women revictimized by multiple aggressors (ExpB = 2.934; $p < 0.026$). Likewise, the odds of belonging to the group of women revictimized by multiple offenders increased by 16% for each point increase in positive reappraisal when compared to those women who had been assaulted on one occasion (ExpB = 0.863; $p < 0.009$) and by 12% when compared to women revictimized by the same offender (ExpB = 0.891; $p < 0.028$). In this third step, social support remained positively associated with belonging to the VSR group with respect to the VSRDA group (ExpB = 1.038; $p < 0.008$) and also with belonging to VSRs with respect to VSRSAs (ExpB = 0.974; $p < 0.05$). Material resources continued to have no relevant weight in the model.

Discussion

Revictimization in women victims of Intimate Partner Violence is a serious problem that still has limited development in the scientific literature. Knowing more about the role played by the psychological and emotional factors of the victim herself in her revictimization is a perspective that, far from blaming the victim, can contribute to the exploration of which factors can moderate the impact of revictimization.

The present study aimed to study the weight of different social and emotional material resources in predicting being victimized on a single occasion (VSR), revictimized by the same aggressor (VSRSA) or being revictimized by different aggressors (VSRDA), with special interest in the analysis of emotional resources that have been largely ignored in research on revictimization.

TABLE 2 Clinical setting by victim group.

Dependent variable	(I) tipovictima	(J) tipovictima	Difference of means (I-J)	Sig.	95% CI	
					Lower limit	Upper limit
Symptoms PTSD EGSR	VSRSA	VSR	4.3736	0.182	−1.4416	10.1288
	VSRDA	VSR	12.2885*	0.000	5.5934	18.9835
	VSRDA	VSRSA	7.9449*	0.012	1.4308	14.4589
Stress DASS	VSRSA	VSR	1.7495	0.142	−0.4258	3.9248
	VSRDA	VSR	4.4919*	0.019	2.0106	6.9732
	VSRDA	VSRSA	2.7424*	0.000	0.3707	5.1141
DASS Anxiety	VSRSA	VSR	1.4766	0.182	−0.4911	3.4442
	VSRDA	VSR	4.6475*	0.000	2.3703	6.9247
	VSRDA	VSRSA	3.1709*	0.002	0.9760	5.3659
DASS Depression	VSRSA	VSR	1.5583	0.171	−0.4821	3.5988
	VSRDA	VSR	4.2875*	0.000	1.9136	6.6614
	VSRDA	VSRSA	2.7292*	0.015	0.4364	5.0220

*$p < 0.05$.

TABLE 3 Hierarchical binomial logistic regression.

	Step 1			Step 2			Step 3		
	β	*SE*	Exp(B) [CI].	*β*	*SE*	Exp(B)	*β*	*SE*	Exp(B) [CI].
Material Resources									
Income level	−0.195	0.127	0.823[0.64−1.06]	−0.134	0.132	0.875[0.68−1.13]	−0.101	0.138	0.904[0.69−1.19]
Employability[a]	−0.447	0.337	1.418[0.65−3.07]	0.360	0.401	1.433[0.65−3.15]	0.343	0.418	1.409[0.62−3.20]
Social resources									
Social support				−0.028*	0.011	0.972[0.95−0.99]	−0.028*	0.012	0.973[0.95−0.99]
Emotional resources									
Emotional regulation[b]							0.542	0.361	1.72[0.85−1.07]
Avoidance coping							0.069	0.043	1.071[0.99−1.17]
Self-negative coping							−0.059	0.041	0.943[0.87−1.02]
Positive coping							0.006	0.031	1.006[0.95−1.07]
Constant	0.893*	0.384	2.443	2.61*	0.811	13.621	1.42	1.22	4.132
$R^{2\ Nagelkerke}$			0.019			0.073			0.124
−2 Log likehood			222.645			215.748			208.838
ΔR^2			0.019			0.054			0.060

[a]reference category is employed women.
[b]reference category is group with effective emotional regulation.
*$p < 0.05$.

Firstly, the results show the importance of taking into account the distinction between women victimized by a single or multiple aggressors when determining the clinical adjustment of the victims. Thus, the latter presented greater post-traumatic symptomatology, stress, depression, and anxiety than those women who were revictimized by the same partner, or who were victimized on a single occasion. Moreover, the greatest differences were found between the group of those not revictimized and those revictimized by multiple aggressors, which points to a dose/response effect according to the type of victimization suffered (Iverson et al., 2013). Differentiation between types of revictimization has also been shown to be an important moderator of the multinomial model posited. Only when distinguishing between the three groups of victims were emotional resources found to be significant in predicting revictimization. These results are in line with those found in

TABLE 4 Hierarchical multinomial logistic regression using VSRDA as the reference group.

Type		Step 1			Step 2			Step 3		
		β	*SE*	Exp(B) [CI].	*β*	*SE*	Exp(B) [CI].	*β*	*SE*	Exp(B) [CI].
VSR	Material Resources									
	Income level	0.210	0.132	1.234[0.95–1.60]	0.140	0.138	1.150[0.878–1.507]	0.216	0.182	1.241[0.87–1.77]
	Employability[a]	0.164	0.400	1.178[0.54–2.58]	0.245	0.414	1.278[0.568–2.876]	0.277	0.530	1.319[0.47–3.72]
	Social resources									
	Social support				0.027*	0.010	1.027[1.01–1.05]	0.038**	0.014	1.038[1.01–1.07]
	Emotional resources									
	Emotional regulation[b]							1.076*	0.484	2.934[1.14–7.58]
	Avoidance coping							0.066	0.052	1.068[0.97–1.18]
	Self-negative coping							−0.003	0.041	0.997[0.92–1.08]
	Positive coping							−0.147**	0.057	0.863[0.772–0.964]
	Constant	0.181	0.487		−1.361	0.773		−1.959	1.421	
	$R^{2\ Nagelkerke}$			0.021			0.054			0.187
	−2 Log likehood			88.692			414.347			345.317
	ΔR^2			0.021			0.033			0.133
VSRSA	Material Resources									
	Income level	0.150	0.137	1.161[0.89–1.52]	0.140	0.140	1.150[0.87–1.51]	0.168	0.170	1.183[0.85–1.65]
	Employability[a]	−0.283	0.419	0.754[0.33–1.71]	−0.195	0.428	0.823[−0.356–1.903]	−0.148	0.509	0.863[0.32–2.34]
	Social resources									
	Social support				0.010	0.010	1.010[−0.99–1.03]	0.013	0.012	1.013[0.99–1.04]
	Emotional resources									
	Emotional regulation[b]							0.773	0.467	2.166[0.87–5.41]
VSRSA	Self-negative coping							0.002	0.039	1.002[0.93–1.08]
	Avoidance coping							0.009	0.048	1.009[0.92–1.11]
	Positive coping							−0.115*	0.053	0.891[0.80–0.99]
	Constant	0.308	0.498		−0.280	0.732		0.514	1.256	
	$R^{2\ Nagelkerke}$			0.021			0.054			0.187
	-2 Log likehood			88.692			414.347			345.317
	ΔR^2			0.021			0.033			0.133

**$p < 0.01$ and *$p < 0.05$.

[a]reference category is women with employment.

[b]reference category is group with effective emotional regulation.

To interpret table correctly it is necessary to keep in mind that a negative sign on the regression coefficient B and an Exp(B) less than 1 indicate that the reference group (VSRDA) is more likely to have a high score on that predictor than the group to which it is being compared. VSRDA = women revictimized by different aggressors; VSRSA = women revictimized by the same aggressor; VSR = women victimized on one occasion; VSR = women victimized by the same aggressor; and VSR = women victimized on one occasion.

Goodman et al. (2005), where, when differentiating exclusively between revictimized and non-victimized women, only social support and coping strategies were predictive. Thus, the type of revictimization, whether by the same or different aggressors, is confirmed as a factor that could improve the fit between the results of the LPI research and reality.

Secondly, material resources, particularly victims' employability and income level, did not predict revictimization despite that which was found in previous studies (Caetano et al., 2005; Orke et al., 2018; Person, 2018). It is possible that the sample's low variability in income level at least partially explains this result, as 70% of the women did not have an income which exceeded €1,000 per month.

TABLE 5 Hierarchical multinomial logistic regression using VSR as reference group.

Type		Step 1			Step 2			Step 3		
		β	*SE*	Exp(B) [CI].	*β*	*SE*	Exp(B)	*β*	*SE*	Exp(B) [CI].
VSRSA	Material Resources									
	Income level	−0.060	0.102	0.941[0.77–1.15]	0.000	0.106	1.000[0.81–1.23]	−0.047	0.148	0.954[0.71–1.28]
	Employability[a]	−0.447	0.337	0.640[0.33–1.24]	−0.440	0.344	0.644[0.33–1.26]	−0.424	0.457	0.654[0.27–1.60]
	Social resources									
	Social support				−0.017*	0.009	0.983[0.966–1.00]	−0.025*	0.013	0.974[0.95–0.99]
	Emotional resources									
	Emotional regulation[b]							−0.304	0.392	0.738[0.34–1.59]
	Avoidance coping							−0.056	0.045	1.032[0.94–1.13]
	Self-negative coping							−0.005	0.034	1.005[0.94–1.07]
	Positive coping							0.032	0.046	1.032[0.94–1.13]
	Constant	0.126	0.396		1.081	0.678		2.472	1.214	
	$R^{2\ Nagelkerke}$			0.021			0.054			0.187
	-2 Log likehood			88.692			414.347			345.317
	ΔR^2			0.021			0.033		7	0.133

To interpret table correctly it is necessary to keep in mind that a negative sign on the regression coefficient B and an Exp(B) less than 1 indicate that the reference group (VSR) is more likely to have a high score on that predictor than the group to which it is being compared. VSRDA = women revictimized by different aggressors; VSRSA = women revictimized by the same aggressor; VSR = women victimized on one occasion; VSR = women victimized by the same aggressor; and VSR = women victimized on one occasion.[a]reference category is women with employment.

[b]reference category is group with low emotional regulation.

*$p < 0.05$.

Thirdly, our results indicate that social support functions as a protective factor against revictimization by significantly predicting membership in the group of non-revictimized women. The protective role of social support against revictimization has been repeatedly found in previous studies. The fact that non-revictimized women are those with greater social support is congruent with studies that relate the severity and duration of violence to distance from family and friends, as a consequence of perceiving their support as useless when women return to the violent relationship (Goodkind et al., 2003; Krenkel, 2014). From this point of view, the loss of social support would be one of the consequences of revictimization which, in turn, would increase the risk of suffering from it.

Fourthly, in relation to emotional resources, the results show that poor emotional regulation is a risk factor for revictimization by multiple aggressors. The importance of emotional regulation in the occurrence of emotional problems and recovery from traumatic events has recently been highlighted. Thus, a recent meta-analysis found that PTSD, regardless of the type of traumatic incident that generated it, it is characterized by a general dysregulation of emotions that acts as a precursor of clinical symptomatology (Seligowski et al., 2015). Taking into consideration, these findings and taking into account the worse adjustment of women revictimized by multiple aggressors in all dimensions of clinical symptomatology evaluated, the results found would indicate that worse emotional regulation could be favoring the continuity of revictimization through clinical symptomatology, especially when such revictimization occurs at the hands of multiple aggressors. This interpretation is compatible with that found by Muñoz-Rivas et al. (2021), where it was shown that the interaction effect between PTSD symptomatology and emotional regulation was significant exclusively in the group of women revictimized by multiple aggressors but not in other groups of victims. These results are consistent with the fact that being a victim of several episodes of IPV at the hands of different aggressors can be understood as a form of greater severity due to the greater associated psychopathology, the worse emotional regulation, and the lesser social support received with respect to women victims of a single episode of violence, or revictimized at the hands of the same aggressor. The importance of emotional regulation highlights the utility of examining which specific emotional regulation strategies are a key in the study of revictimization, as we have begun to do with strategies for coping with violence. In a first approach, it was found that women

revictimized in IPV with poor emotional regulation and high PTSD symptomatology tend to use specific regulation strategies based on emotional impoverishment, which implies difficulty in experiencing emotions and poor emotional processing, and which involves negative mood and intrusive emotions (Muñoz-Rivas et al., 2021).

In addition to emotional regulation, another emotional resource that has generated an interesting result has been the coping strategy of positive reappraisal, which is more frequently used by women victims of different aggressors than by women not revictimized or revictimized by the same aggressor. Positive reappraisal has classically been considered an "engagement" strategy, associated with healthy stress coping patterns (Iverson et al., 2013). Therefore, initially this result is paradoxical, since in our study positive reappraisal is used more precisely by the group of women who have demonstrated the worst clinical adjustment and poor emotional regulation skills. Nevertheless, Zink et al. (2006) emphasized that reappraisal of the violent relationship plays a key role in learning to live with abuse, especially in young women. The interpretation of this result is clarified, first of all, from the framework of learned helplessness, which proposes that those women with more severe and prolonged histories of revictimization develop attitudes of resignation and hopelessness due to the absence of control over their circumstances (Walker, 1979), which makes it more challenging to end the abusive relationship (Di Basilio et al., 2022). Thus, according to the results found, faced with the impossibility of changing or escaping from their situation, women revictimized by multiple aggressors would resort to positive reappraisal to change their interpretation of their situation. Moreover, younger women are more likely to use this coping strategy in their situation of helplessness, as Zink et al. (2006) have already found. This explanation in terms of the learned helplessness theory is even more plausible if one takes into account that, in the current study, almost 40% of the women revictimized by different aggressors stated that they were likely to be assaulted again by other partners in the future when compared to 20% in the other two groups.

Secondly, another factor that could contribute to the greater use of reappraisal strategies in women who have been revictimized by multiple perpetrators is social support. Thus, in the review by Waldrop and Resick (2004), it has been suggested that battered women's shelters may be a useful place where women can begin to stop reevaluating their situation and minimize its seriousness by hearing from other victims that abuse is negative. Similarly, Kacot and Goodman (2003) found that "engagement" coping strategies, far from favoring the adjustment of victims of IPV, were associated with greater post traumatic symptomatology, especially when the participants had little social support. Considering that our results show lower social support precisely in those women revictimized by multiple aggressors, it would be interesting to test two possibilities. Either the mediating role of social support in the use of positive reappraisal coping strategies, or, conversely, whether the use of positive reappraisal strategies could be acting as a barrier to seeking social support, taking into account that in the recent systematic review conducted by Robinson et al. (2021) it was found that precisely the lack of awareness of violence is the main barrier to seeking help in women victims of IPV.

In any case, these results support the utility of using an intra-individual approach in the study of coping strategies as opposed to trans-transituational models that assume the functionality or dysfunctionality of the strategies without taking into account the context in which they are used (Waldrop and Resick, 2004; Puente-Martinez et al., 2021). In this study, it has been found that under circumstances of violence maintained over time in different relationships, in women with low social support and younger age, the victims are more likely to use strategies of reevaluation of the situation to adapt to it in the short term, although this could mean maintaining the situation of violence. However, more studies are needed to specify under what conditions some coping strategies are more likely to be used than others. For instance, Han et al. (2022) found that women victims of physical injury and sexual abuse are more likely to use coping strategies based on the absence of reaction to violence, similar to learned helplessness.

Limitations

This work has some limitations. Firstly, the results can only be generalized to battered women who have filed a police report against their partner, which should be evaluated as an indicator of severity in an IPV context. Secondly, the cross-sectional design does not enable us to examine temporal relationships between the variables, which prevents us from knowing whether the different resources play a role of antecedent or consequence with respect to the different types of revictimization. Thirdly, the variables "avoidance coping strategies" and "positive reappraisal" did not show a significantly linear relationship with the logit of the independent variable. However, the quadratic relationship was not significant either, so although a linear relationship could not be demonstrated, it could not be ruled out either. Finally, this study only includes a part of possible coping strategies, so it would be of interest to carry out research that contemplates a greater number of dimensions and their interaction with other variables such as social support, with which associations have already been identified in previous studies (Kacot and Goodman, 2003, Goodman et al., 2005). Other factors of interest, such as the type of violence suffered or its severity, have not been taken into account in this study neither. These characteristics of violence have been shown to play a moderating role in previous studies (Testa et al., 2003; Kuijpers et al., 2012; Di Basilio et al., 2022) so it would be advisable to evaluate them and include them in future analyses.

Future clinical implications

The findings of this study have substantial clinical implications. This research points to the possibility of interventions

with female IPV victims that focus on emotional resources. Given that cognitive behavioral therapy is less effective when there is intense affect dysregulation (Taylor and Harvey, 2010), victims may benefit from acquiring affect regulation skills (Ford et al., 2011), especially for women with a history of cumulative victimization. Another important contribution of this study points to discarding the usual recommendation of generic training in coping strategies or emotional regulation considered adaptive (Iverson et al., 2013; Puente-Martinez et al., 2021). According to the review by Waldrop and Resick (2004), non-specific training in problem-solving skills is not effective in the group of revictimized women when there are circumstances of lack of social support. Instead, it would make more sense to train women to begin to develop their own capacity to identify what role their coping strategies play in sustaining the violence, as well as to help them begin to build a support network. As Di Basilio et al. (2022) claim in their recent study, revictimization should be understood as a dynamic process involving multiple forces that push the victim to leave or continue the relationship. Interventions should move away from trying to follow standardized programs to try to help the victim identify which are the personal and contextual factors that promote and accelerate the process of disengagement with the perpetrator. In short, it is necessary to take into account the specific context of the victims when designing an intervention and, in particular, this work puts the focus on women who are more vulnerable due to their history of revictimization with multiple aggressors and low social support, who will tend to use strategies of re-evaluation of the situation in order to adapt to it in the short term, running the risk of maintaining their problem in the long term.

Data availability statement

The data are not publicly available due to privacy and ethical restrictions. Data are available upon reasonable request and upon the signature of a confidentiality agreement from the research team. Requests to access the datasets should be directed to marina.munoz@uam.es.

Ethics statement

The studies involving human participants were reviewed and approved by the Institutional Review Board of Universidad Autónoma de Madrid (CEI-941720). The patients/participants provided their written informed consent to participate in this study.

Author contributions

AB, IM, and MI: conceptualization and supervision. AB and IM: methodology, formal analysis, data curation, and writing–review and editing. AB: resources and writing–original draft preparation. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Media representations of crimes in close relationships: Qualitative analysis of narratives in a television broadcast

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Recent years have seen increased media attention paid to crimes committed against women by partners or former partners has grown. Crime, especially violent crime, dominates the news and the mass media. In this sense, criminology" impacts publicly the collective representation of crime. The study was motivated by the interest to understand what representations are conveyed by television broadcasts and how closely related they are to criminological theories and literature on the subject. The objective of the proposed qualitative research is to examine the media representations proposed in thematic television broadcasts, as well as the narrative profiles relating to the victims, perpetrators of the crimes and their relationships, as described in the news and by a multiplicity of roles associated with them based on kinship, friendship or professional role.

KEYWORDS

media communication, crime of passion, qualitative research and analysis, MAXQDA, popular criminology

Introduction: Crimes of passion and their media representation

Our contemporary society is characterised by violence in its various forms.

Increasingly, news stories and media stories produced by the media bring to the public's attention more and more cases of violent behavior (persecutory acts, murders, physical, psychological and sexual violence) carried out within emotional, family and relational contexts that represent a very topical and interesting topic.

The phenomenon of violence has always existed and was considered a "normal" consequence of some relationships until a few years ago. The cultural climate has changed today, bringing the problem to light. Therefore, the community has felt the need to give a name and an explanation to this phenomenon.

The growing pervasiveness and diffusion of the mass media (including recent developments in on-demand TV and thematic channels) has helped to amplify public interest in crime news. With their realism, cinema and television dramas display contents that resemble

reality and that until recently were only accessible to professionals. Consider television series with autopsies that abound or with skilled detectives who stand "with breath on their necks" of the equally skilled criminals, in what often appears as a short circuit between fiction and reality; the dramatic reciprocal influence from one level to another is evident. In other cases, video surveillance films of the most well-known and striking crimes or reconstructions featuring actors in the roles of protagonists appear to take the viewer right to the scene of the crime.

The participation (practically live) that these broadcasts allow spectators is certainly a novelty in the field of crime representation, and arouses strong emotions.

Over time, the mass media and social media have given increasing prominence to news stories regarding crimes within close relationships.

Media play an essential role in producing and reproducing of representations of reality; criminal chronicle and its protagonists are no exception. Violence against women receives prominence in conjunction with more serious facts that trigger the public agenda, events and political speeches (Easteal et al., 2015). In these processes, television is crucial.

It is common for the cases described to report stereotyped profiles of perpetrators and victims, like mainstream narratives. However, these are often one-sided narratives in which we "listen" to the voice of the journalist or editor of the television service. Rarely do we have at our disposal the reconstruction that have been made by relatives, police officers or lawyers.

According to Alvarez et al. (2021), women in Latin America most likely to carry gender stereotypes were those who tolerated harassing and abusive behavior by their partners. The evidence is interpreted in the light of socio-cultural aspects which suggest many of them have internalized traditional gender roles, believing that enduring violence within couple relationships is a necessary part of social role.

Consequently, one of the most powerful vectors of socio-cultural values can be observed in the mass media (Rollero, 2020). Communication researchers refer to cultivation theory to argue that individuals obtain information from the mass media to construct an image of reality (Gerbner et al., 2002). Furthermore, the media are identified as the primary means of conveying information and shaping individual perceptions concerning gender stereotypes and gender violence. Several studies have explored how the media constructs and reports men's violence against women.

Rollero (2020) found that mass media cultivate images of reality and have an influence on how people describe themselves and others; by conducing semi-structured interviews with perpetrators of violence against partners, the author noted that the conceptualization of violence is not only an individual issue, but is largely influenced by the social representations conveyed through mass media.

According to Carley et al. (2008), the spectacularization of violent crime has several implications for public perceptions and social policies. The authors argue that to understand media representations of violence it is necessary to understand how they are framed. In the view of Gamson (1989) a "frame" is a central organizational idea that provide meaning to relevant events and suggests what is relevant and what is not. A frame allows you to place an event in a sort of social context.

Furthermore, the effects of this framework have repercussions both at the individual level (as deduced from the studies on individual representations) and at the social level.

Materials and methods

The increase in media interest in crime news cases was accompanied, in particular, by a parallel interest in crimes that occur within couples, in the relationship between (former) spouses, cohabiting coupes, lovers.

The uproar aroused by these crimes lies in the fact that in almost all cases (at least those that stand out in the media crime news) the victims are women.

"Amore Criminale" is a well-known television program that has been broadcast on Rai 3 since 2007 and aims at raising public awareness, reconstructing and denouncing such situations through a filmic narration and the testimony of relatives, friends and investigators, lawyers, technical consultants, psychiatrists, criminologists. Crimes are always occurs in the context of intimate, current or terminated relationships.

The program is a *docufiction*, that is a genre of film that attempts to narrate reality through fiction. In this sense, the broadcast combines a reconstruction of the story with a documentary of its facts.

Through interviews, the lives of the murdered women are narrated, as well as the development of the couple's relationship up to the moment of the murder.

The interviews are supported by filmed reconstructions in which there are actors who interpret some scenes from the story and documentary material (newspaper articles, television news, proceedings).

Through each episode's narrative, the viewer is led to reflect on the social, psychological and cultural profile of the victims and murderers and the dynamics present within the couple. Thus,"folk criminology" (Popular criminology) representations of crime is created, a naive attempt (unskilled, unexperienced) to understand the crime through a process of attribution of meaning based on common sense with respect to the profiles of the perpetrator of the crime, the victim and the relationship between them (De Gregorio et al., 2017).

Objectives and procedure

The aim of the research is to explore the explanations and interpretations, the representations of the crimes and the social actors involved in cases of murders of a woman. We will try to reconstruct the media representations as they are conveyed by a

well-known thematic television program, focusing on narrative profiles of victims, perpetrators of the crimes and the relationships among themselves; these descriptions are derived from the news reported in the television broadcast and from a multiplicity of roles that are linked to them by kinship, friendship or professional role.

This exploration of media representations is based on the double level of popular and media criminology as proposed in a well-known television program entirely dedicated to crimes committed within emotional relationships.

The analysis was divided into two interconnected levels:

- The level of representations of the individual stories of the victim and the murderer;
- The level relating to the couple's relationship and the representation of the couple in the reconstruction broadcast.

The methodological perspective that is used in this study is qualitative and interpretative based on thematic analysis (Braun and Clarke, 2006). In carrying out the thematic analysis, we resorted to "sensitizing concepts" (Blumer, 1969) which describe the conceptual foundations–metaphorically, the "bricks"–that form the basis of the analysis/interpretation process; these concepts, connected to each other in narrative themes, allow us to formulate a discourse, a narrative, in which the researcher's interpretation must be recursively compared with the broader theoretical and conceptual frameworks. Underlining the close connection between themes and research objectives, Braun and Clarke (2006) affirm that a theme captures content considered relevant to the questions formulated in the definition of research objectives.

Based on these premises, 17 episodes of the program "Amore Criminale" were selected in the seasons broadcast between 2013 and 2018 (at the time of the research, available for free on the broadcaster's website).

The episodes in which the victims survived the violence and attempts of oppression were excluded.

The thematic analysis was carried out for the entire episodes, including the interviews/ testimonies and the narratives of the narrator deal directly with the crime.

Besides the information contained in the transmission, no further information was acquired (from newspapers or websites), both because these sources are often included in the transmission itself and to avoid influencing the point of view artificially.

Data management

The 17 episodes have been included in the MAXQDA program (Kuckartz and Rädiker, 2019), have been viewed and codified.

The thematic analysis of each episode was carried out by viewing each episode and fragmenting the entire movie into minimal conceptual units (narrative themes), associating each theme with codes, verbal labels that summarize its content. However, we wanted to go beyond the simple categorization of profiles and roles of the protagonists of the story, also intending to reconstruct the themes relating to their relationship as reported by the words of other narrating actors: the relatives of the victim and the perpetrator of the crime (parents, siblings, children, grandmother, grandfather, son or daughter), including the victim's extended family (grandparents / uncles/ cousins, daughter-in-law/ son-in-law), their social networks (friends and acquaintances, neighbors, colleagues former partner of a previous relationship);

The statements coming from privileged witnesses informed about the affair and trial actors were also codified: lawyers, law enforcement agencies, public prosecutors, journalists, technicians and experts (criminologists, psychiatrists, consultants and / or the court, and forensic psychiatrists).

The coding process consists in assigning codes to the raw data that summarize the viewed content; in a subsequent phase we worked on the search for associations between narrative codes / themes to identify the representations underlying the data.

For each episode, segments have been selected that represent specific concepts/coding units; each code–where necessary–has been divided into (possible) sub-codes to further specify the content; in a subsequent phase, the codes were aggregated into sets of codes, larger conceptual units that collect the information scope of related codes pertaining to the same conceptual domain.

In addition to the information directly attributable to the profiles of the two protagonists, the elements concerning their relationship have also been codified, that is, all the discourses concerning the relational dynamics within the couple, including, for instance, the age difference between the members of the couple, the presence prior to the crime of acts of physical or psychological violence against the victim, the woman's reactions to the violence suffered, the presence of numerous quarrels between members of the couple, the couple's economic situation, dynamics relating to work, the presence or absence of psychiatric pathologies detected in the offender, elements connoting an emotional dependence, aspects concerning the children born from the relationship or from previous ones, the dynamics connected to the relationship that the two had with their children, the dynamics relating to the decision of the woman to move away and interrupt the relationship, the possible real or imaginary presence of a betrayal by one of the actors in the story or the presence of new relationships by one of the two, the man's reactions to the end of the relationship.

Results

From the analysis of the 17 stories examined in the episodes of the program "Amore Criminale," it emerges that between these stories, 8 couples are presented who were married at the time of the murder, while 9 couples had a relationship that was not bound by marriage.

The 17 murder victims had an average of 35.5 years, in particular, they were over 30 years old in 10 cases.

The episodes examined report 3 murders in Central Italy, 7 in Southern Italy and 7 in Northern Italy.

From a first observation it emerges that the phenomenon of violence against women (more specifically the killing of one's wife or ex-wife or partner) is a transversal phenomenon that concerns every age group, geographical area of origin of the protagonists of the story, and it is also impossible possible to draw conclusions about the status of the relationship at the time of the murder (was the relationship ended or still in progress).

When comparing the duration of relationships, one interesting fact emerges; in fact, 12 cases involved relationships that lasted 3 or more years and only 5 cases involved relationships that lasted less.

Considering the complexity of the coding of the contents relating to each story narrated, the variables that can be analyzed are numerous. In order to define the media representation of this type of crime, we limit ourselves here to examining the most salient points.

The victims

The woman, following the violence suffered, would begin to feel particularly unhappy as reported by her close relatives and friends. In some cases, the victim of violence gradually begins to isolate himself, perhaps out of shame or because the man forces him to do so, thus hiding the real situation of the couple and the possible violence suffered from relatives and friends.

Relatives, friends, and acquaintances tell of how the woman was submissive to man, plagiarized and manipulated, confirming in a certain sense a decidedly stereotyped vision of the victim. That is, at least, the vision transmitted by the analyzed television contents. As insiders, we take into consideration that the complexity of these situations is such that it cannot be reduced to simple stereotypes (Tullio et al., 2021).

Analysing the stories in which the murder occurred after the romantic relationship between the partners ended, in 6 out of 10 stories, women felt guilty after leaving the man despite suffering the psychological and / or physical abuse, confirming the particular psychological fragility attributed to women in these situations, as has been demonstrated by academic literature and common sense.

The victim is defined as "emotionally fragile and weak" (5 stories), but also "strong and determined" (5 stories) or "energetic and vital" (10 stories). The woman is generally described as "attentive to the needs of others" (7 plots), "dreamer and idealist" (5 plots), "passionate about her work" (6 plots). The role of mother is just mentioned a few times ("an affectionate and present mother," in 4 plots) and we imagine that this is because the role of mother and that of a woman victim of a crime would make the stereotypical representation of the profile of the victim. Finally, the characteristics of "independence" (6 plots), and a "sweet and affectionate character" (5 plots) are attributed to women.

We notice that the popular speeches about the victim concern only positive, desirable characteristics; it is well understood that they are produced by people who have been close to the woman during her lifetime and may be the result of an emotional memories.

Often, the woman is described as very attached to her family of origin (7 plots) and coming from a united and serene family environment (8 plots).

Regarding the victim, the literature also indicates vulnerability or predictability factors which represent characteristics of the woman that are related to her history, her personality organization and the situations that may have fueled the risk. However, these refer to different emotional characteristics such as aggression, anger, impulsiveness, passivity, low self-esteem, and social isolation. But once again we cannot escape the stereotypical description, typical of mass media production. In our opinion, the stereotypical description of these feelings depends on the format of the television narration which leaves no room for an in-depth analysis.

The stories told about the past of women very different from each other, more inhomogeneous than those of. Few plots (3) mention the separation of the parents, the death of one of the two or the absence of the father figure. The victim is mostly described by the figures who have been emotionally attached to her during her life, and the victim's profile follows a typical model of the woman in this type of situation.

The perpetrators of the crimes

As for the offender, in the 17 stories, completely different descriptions will be made with respect to his personality characteristics and life stories.

It should be borne in mind that the space dedicated to the description of the murderer's life is less than that of the victim. This is because the narrations are mainly made by people who are emotionally related to the woman.

Psychological characteristics (character, personality, emotions, cognitive aspects) and non-objective data (socio-economic status, level of education) predominate in the representations of the protagonists, confirming that these variables most commonly suggest a stereotypic vision of the profiles described.

More specifically, the man is described as "introverted" (6 plots), "meek and calm" (7 stories), but also "arrogant and bold" (7 plots) and "liar" (4 plots). It is striking that in some cases, the man is described as a "good guy" (7 stories) and "good-looking and charming" (4 plots), as if to lessen the negative effect of the description of only undesirable traits and however less attention is paid to the physical aspect.

In this sense, media narratives offer viewers a sort of psychological identikit of the murderer, but in fact scientific literature does not refer to a set of characteristics, as according to scientific criminology it is not only a person's character that makes him a murderer, but a set of factors found in the dynamics of the more or less remote past, in the styles of attachment with one's caregivers as well. Only in very few cases do the narrative plots explain these factors with which interviewees and experts attempt

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to provide an explanation to what happened (often in a deterministic way).

Only in a few stories traumas experienced by humans are discussed as a result of the separation of parents at an early age and the subconsequent sense of abandonment.

A few cases mention alcohol and psychotropic drugs abuse, while others describe childhood and adolescence of man in terms of being bulled or witnessed violence.

A point where media narratives meet with scientific literature of a criminological nature is that the perpetrators of the crime are often described as "good guys."

According to Karadole (2012) the perpetrators of the crime "would mostly be unsuspected in the eyes of society; the identikit of the murderer that emerges from the investigations of femicides is different from that of the stereotype of the man who is dangerous, disadvantaged, foreign and poorly integrated culturally or socially in our country" (p. 32).

These data suggest how media narratives present gaps, whether they are aware or not of the description of the perpetrator of the crime. In order to understand the man and his violent acts better, we must analyze his most profound and remote life dynamics. These dynamics are at least partially related to those present within the couple relationship.

In almost all the stories, close relatives, friends of the victim and expert technicians speak of a "sick relationship." In narrative reconstructions, a sense of disbelief is described about the reasons in which the victim might have undertaken or continued a relationship that brought serenity and well-being.

As such, scientific literature suggests that it is rather couples in which each component brings deep needs that cannot be understood except in mutual emotional interdependence.

Our data confirm that in almost all the stories (14) the man refused to accept the separation from the woman, because he did not want to lose her. Attributed to man, only in one story is there any reference to a state of bipolar depression diagnosed prior to the homicidal act.

In 5 plots, various psychiatric pathologies are mentioned, but only in the trial phase as a possible defensive "trick" to give the accused a partial mental defect. These include Narcissistic Personality Disorder, Borderline Personality Disorder, Impulse Discontrol Disorder, and Bipolar Disorder.

The lawyers or various expert technicians who hold the role of consultants will speak about the possible presence of psychiatric pathologies.

The literature indicates that less than 10% of men who kill their partners or former companions have psychiatric problems, and therefore most violent acts in society are committed by people who are considered "healthy."

The relationship

The next step in our discussion is to describe the relationship between the two protagonists of the stories, the perpetrator of the crime and his victim. As mentioned before, there is a sense of disbelief described in these narrative reconstructions related to the reason in which the victim would have accepted an unhealthy relationship. There are many stories in which the women intended to distance themselves from the relationship even though they had not yet stated it explicitly. This is because they had moved away at first and then returned together with their partner. Family members and witnesses are not always aware of these movements; in fact, this information is reported in the narrations of all those who intervene in the reconstruction of the stories. There are many stories in which the woman intends to interrupt the emotional relationship. Criminological literature reports this as one of the main elements.

It was found that most perpetrators did not want to lose the woman, so they did not accept her separation from them. It is interesting to note that most of the television broadcast that deal with "emotional dependence" consult lawyers and expert technicians.

In 11 stories there are control behaviors that the man implements towards the victim during the relationship. In 5 plots the man assumes verbal behaviors aimed at denigrating, humiliating and judging the woman. These behaviors, as the literature suggests, have the purpose of nullifying the person who suffers them and whoever carries them out intends to assume a position of control and prevarication.

As another interesting fact, the isolation from the social network that men impose on women is often linked to their attitudes of control and jealousy. Here, once again, we see an enhancement of the relationship between the two protagonists.

In many stories, it is revealed how the woman progressively distances herself more and more from her family, friends and social network, becoming more and more alone and isolated.

Conclusion

According to our findings, media representation of the history of intra-family crimes is superimposed on criminological theories. It is an overlap that leads to stereotyping the profiles of the protagonists without taking into consideration the complexities of their lives, the intricate intermeshing of their emotional relationships, and the mechanisms and reasons leading to their crime.

Additionally, to facilitate general public's understanding of the causes of a crime, it is necessary to consider, in particular, the relationship between the victim and the perpetrator of the crime.

In this case, the murder of the partner can only be viewed as a tragic outcome of the couple's dysfunctional relational dynamics. In a systemic perspective, victims and perpetrators of crimes are placed within a complex network of relationships and interactions. This topic cannot, however, be discussed in more detail due to the limited length of this paper.

We have analyzed stories in which representation of couple relationships and crimes are anchored to a few stereotypical elements (e.g., jealousy, possession, violence) without exploring the psychological mechanisms and processes that may underlie these manifestations explaining the complexity of relationships.

Broadening the perspective, it can be said that crime is an action by which an individual experiences himself; he confronts himself with the social, with other systems, and thus defines his own subjectivity in interaction, leaving personal traces and assuming feedback that refers to a continuous process of identity (re) elaboration (De Leo and Patrizi, 1999; De Leo et al., 2004).

The crime as the dramatic outcome of a relationship can therefore be read and interpreted through the author's messages conveyed through the striking and disruptive action.

In examining the reactions that the man has in response to the woman's decision to end the relationship, we see that the folk and media narratives are consistent with the scientific literature.

In scientific criminological theories, psychological, physical or economic violence is a risk factors for the murder of the partner.

The findings of this study indicate that both the media and the naive criminological narratives seem to confirm this fact, in fact, in as many as 15 plots, a form of psychological violence against women is reported.

It is possible to affirm that the media narratives and the underlying criminological theories are quite aligned with the scientific criminological theories, often because–in the years taken into consideration–a psychologist and criminologist expert in violence against women and author of several books that also deal with the themes of uxoricide and mistreatment, was present.

In several episodes, the criminologist clarified the dynamics that link murder and violence against women, in a space dedicated to her.

Several media choices were influenced by the aim of arousing interest and amazement in the viewer through highly effective narrative constructions.

These broadcasts generally present women as "victims of sick love" or "women who cannot save themselves" and often talk about a single case by generalizing some concepts to all stories of women victims of violence, thus promoting further stereotypes.

Data availability statement

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found at: https://drive.google.com/file/d/13rqt7QuzD0LalSUq8Fxm4enSuHzDxS2v/view?usp=sharing.

Author contributions

The article was jointly planned by ED, CM, and LT. CM took care of the data analysis and the drafting of the theoretical part. ED wrote the methodological part and supervised the data analysis. LT supervised the literature, checked the language, and wrote the conclusion. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Sexual femicide, non-sexual femicide and rape: Where do the differences lie? A continuum in a pattern of violence against women

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Violence against women is a growing health problem, especially when perpetrated in intimate relationships. Despite increasing attention, there is little comparative evidence on the different types of violence involved and there is a paucity of research on sexual femicides. This study examines cases of violence against women in northern Italy, focusing on sexual and non-sexual femicides and comparing them with rape that does not result in femicides. The sample included 500 women who were victims of sexual and non-sexual femicides, and of rape. Results show sexual femicides mostly involved unknown victims or women who were prostitutes. Sexual femicidal offenders used improper weapons to kill their victims, acted in secluded locations, and fled the crime scene; their crime was more likely the result of predatory intentions, with antisociality and sexual deviance being the most significant factors related to this type of femicide. The criminal and violent pattern that characterized sexual femicides in this study shared significant similarities with the pattern of violence involved in rape. Rape victims were in fact mostly unknown, or involved in a brief relationship with their killer. When the victim was known it was more likely that the abuse occurred at home and in front of the woman's children. Rapists were often under the effect of alcohol or drugs. Non-sexual femicides mainly involved known victims, and they were more often committed in the context of domestic disputes. It was not seldom that the long relationship between the victim and perpetrator was likely to be characterized by contentiousness, suggesting that the woman was often victim of an oppressive climate of emotional tension and domination. Morbid jealousy contributed to aggravating the tone of a controlling relationship. Non-sexual femicides bore more similarities to cases of rape within the pattern of intimate partner violence. Findings are discussed in terms of their implications for prevention and intervention.

KEYWORDS

violence against women, sexual femicide, non-sexual femicide, intimate partner violence, rape

Introduction

A major public health problem and human rights violation plaguing humanity is violence against women (hereafter abbreviated as VaW) (World Health Organization [WHO], 2017). VaW takes different forms (emotional, sexual, psychological, physical, economic, and cultural) that vary in frequency, intensity, and severity (Marks et al., 2020). It also differs according to types (known or strangers) and number (single or multiple) of victims involved (Zara et al., 2019, 2021) and the nature of the relationships (intimate, familiar, acquaintance or superficial vs. no relationship) between victims and perpetrators (Gino et al., 2019). It is not uncommon for victims to be in serious danger of losing their lives (Matias et al., 2020) i.e., femicide. Femicide is a violation of the basic human right to life, liberty, and personal security (Russell and Harmes, 2001).

Despite a lack of reliable data making it difficult to estimate the true extent of VaW aggravating into femicide, the most consistent research finding across the world is that only a small proportion of femicide occurs within an anonymous setting (Zara and Gino, 2018). According to the United Nations Office on Drugs and Crime (UNODC, 2021), on average, every 11 min a woman is killed by someone she knows; often it is someone in her own family, someone with whom the victim had an affective and/or intimate relationship. In most cases, such a killing is the culmination of previous experiences of various forms of violence, including sexual violence, perpetrated against them.

The sexual component of violence against women (e.g., rape) deserves special attention in so far it would lead to a more comprehensive understanding of those cases in which women are predominantly raped but not killed, those cases in which the rape occurs later and in a context of an oppressive, abusive and domineering relationship, and those cases in which women are also killed before, during or after being sexually abused. Notwithstanding that literature on femicide has grown in recent years, specialized studies on sexual femicide are still limited and within the general conceptual framework of sexual homicide (Chan, 2017).

According to the United Nations, VaW is one of the least prosecuted and punished crimes in the world. Although it is extremely difficult to compartmentalize violence into discrete events, an understanding of the psycho-criminological factors that anticipate the occurrence of femicide (sexual and non-sexual) and of rape is essential for scientific and clinical reasons, but above all for preventive purposes, that is, also to prevent the pejorative transformation of violence into femicide. The multidimensional offensive pattern of rape includes sexual violence that is intertwined with intimate partner violence (rape within IPV) (Campbell et al., 2003; Spencer and Stith, 2020) or sexual violence *per se* (rape 'only') (Veggi et al., 2021).

The following pages describe these forms of violence against women: sexual and non-sexual femicides, each compared with rape.

At the first level of analysis, the primary focus brings together some of the worst and most extreme aspects of VaW by examining whether and to what extent sexual and non-sexual femicides are similar or different, and whether they share more similarities or differences with rape.

At the second level of analysis, the focus is more specifically on sexual and non-sexual femicides compared with rape that occurs within IPV and rape 'only.'

The shadow of sexual violence

Sexuality is the most intimate dimension of life (Zara, 2018) and its respect is paramount for the well-being of the person. It follows that the violation of sexuality is one of the most offensive forms of violence against a woman with long-term consequences upon her psychological, relational and physical health. It offends her as a person. It mortifies her sense of *self* because it deprives the victim of any choices of when, how, and with whom to share her search for intimacy and for pleasure (Tarzia, 2021).

Clinical findings on women who survived IPV show that abused women are rarely keen to share sexually abusive incidents unless specifically asked about them (Heron et al., 2022). According to Walker (1994, 2009), it seems that the sexual component of the abuse experienced by women is recounted as the worst in terms of both humiliation and physical pain. These findings are in line with what partially emerges (or cannot emerge) from statistics[1]: the dark number behind rape and sexual assault is extremely high and this is testified by their low report rates (Truman and Morgan, 2018). Unacknowledged rape is a quite common phenomenon not only among college women (Littleton et al., 2007) but among women survivors in the community (Harned, 2005), who do not label their experiences as rape but instead use more benign labels, such as «miscommunication» or «bad sex» (Wilson and Miller, 2016). The *sexual script* (Masters et al., 2013) adopted in such circumstances acts as a copying mechanism, mostly soon after the event, when confusion is still the main sensation that obliterates awareness of what had really happened (Kahn et al., 2003).

Studies show that unacknowledged rape is more likely to occur when the perpetrator is known, often in an intimate and romantic relationship with the woman (Littleton et al., 2018), in a setting in which abuse of alcohol or binge drinking has altered any sense of control (Peterson and Muehlenhard, 2011), and in which the woman often declares that she did not engage in a clear resistance strategy (Cleere and Lynn, 2013). Taken together these findings reveal that a sexualized offense is experienced as an amplified trauma in which not a single part of the victim was left untouched. Studies also suggest that when rape occurs

1 For a more comprehensive view of statistics see also: https://worldpopulationreview.com/country-rankings/rape-statistics-by-country.

within a relationship it is more likely that it is embedded in a broader pattern of abuse and violence (Coker et al., 2000; Matias et al., 2020; Sardinha et al., 2022). Rape that escalates into femicide, i.e., sexual femicide, is a type of VaW of a relatively rare occurrence (World Health Organization [WHO], 2012). However, its impact is extremely destructive.

Sexual and non-sexual femicides

Sexual femicides

If the term femicide refers to the killing of women by men *because* they are female, the term sexual femicide refers to the extreme form of control in which sex is used to degrade them to the point of death. The nature of the relationship between victim and perpetrator tells *how* and *why* the victim is killed. **Table 1** presents a description of all these forms of violence that are the objects of this study.

There is a dearth of specific studies on sexual femicide, and most investigations focus on sexual homicide (Chan, 2017). The use of sexual violence in the form of rape is an extreme form of control against a woman and sexual femicide is considered the most misogynistic form of violence in which a woman is reduced to a sexual commodity or a mere object of control, who once sexually used, could be thrown away (Horley and Clarke, 2016). Therefore, sexual femicide becomes the criminogenic setting where VaW can be explored in its boldest form, because the final gesture of femicide combines, in the act of killing, sexualized aggression, contempt, entitlement, predatory attitudes, psychological and physical domination, and vindictive interests (Salfati and Taylor, 2017).

To understand what distinguishes lethal from non-lethal sexual assaults and whether sexual killers constitute a distinct group of sex offenders, Stefańska et al. (2015) compared sexual killers to sex offenders (specifically offenders involved in rape or attempted rape). Overall, these groups had more similarities than differences (Stefańska et al., 2015).

According to Beauregard and Martineau (2016), sexual murderers seem to have similar characteristics (combination of deviant sexuality and antisociality) to violent, non-homicidal sex offenders, defined as individuals involved in a heterogeneous criminal career (Merlone et al., 2016; Zara and Farrington, 2016) but also primarily preoccupied with sex (Zara et al., 2019).

As suggested by Carter and Hollin (2014), it might be relevant to place the offense in a situational context to understand whether the killing and the sexual element of the violence are directly or indirectly related. When they are directly linked, the act of killing is itself sexually gratifying, or the killing facilitates sexual acts on the victim's body at the time or following the killing. When the killing is indirectly linked to rape, the killing is not a source of sexual arousal or stimulation but is an extreme reaction to restore control (e.g., the victim is killed because she is trying to escape or end the relationship).

Despite the rich attempts to establish a comprehensive set of criteria to define sexual killing (Ressler et al., 1988; Chan, 2015; Carter et al., 2017), little is known about what makes a femicide sexual and what makes femicidal sexual offenders distinct from non-femicidal sexual offenders. The latter could be a form of hate crime that requires specific scientific, social, cultural, and clinical attention.

Burgess et al. (1986) were among the first to attempt to classify sexual homicide and to distinguish sexual homicide from simply a homicide resulting from a sexual assault. They maintained that sexual homicides "result from one person killing another in the context of power, control, sexuality, and aggressive brutality" (p. 252). Häkkänen-Nyholm et al. (2009) emphasized that most of the victims of sexual homicides are female.

A widely used definition of sexual killing based on physical evidence at the crime scene or in forensic records is that of Ressler et al. (1988). For a killing to be considered sexually motivated, at least one of the following criteria must be met: (1) the victim lacks clothing; (2) the victim's genitals are exposed; (3) the body was found in a sexually explicit position; (4) an object was inserted into the victim's body cavity (anus, vagina, or mouth); (5) there is evidence of sexual intercourse (oral, vaginal or anal); (6) there is evidence of substitutive sexual activity (e.g., masturbation and ejaculation at the crime scene, or body exploitation) or sadistic sexual fantasies (e.g., genital mutilation).

Holmes and Holmes (2001), simplified the classification, and defined sexual homicide as the combination of lethal force with a sexual element.

Chan (2015, p. 7) added to the previous classification two new criteria: (1) a legally admissible admission by the offender regarding the sexual motive of the crime that intentionally or unintentionally results in homicide; (2) an indication of sexual elements of the crime from the offender's personal effects (e.g., home computers and diary entries).

Salfati (2000) differentiated types of homicide based on their behavioral nature found at the scene, and on the dual model of aggression by Feshbach (1964): expressive and instrumental aggression. Expressive (or hostile) aggression typically occurs in response to circumstances that trigger anger, with the intention of making the victim suffer. In contrast, instrumental aggression results from a desire to acquire objects or status (e.g., valuable items, control, and territory) regardless of the cost. This distinction suggests that expressive aggression may more likely be exercised against known victims, whereas instrumental aggression may more likely be exercised against unknown victims.

Non-sexual femicides

Non-sexual femicides is characterized by violence that escalates into a lethal epilog. Studies show that non-sexual

TABLE 1 Variables coding schema.

Variables	Definitions for coding protocol
Criminal careers	With the concept of 'criminal careers' is meant here the official crimes that led to convictions attributed to the individual perpetrator, as indicated in the forensic files examined, and the self-reported offenses as they are reported in the criminological and clinical files. We are aware that this is only a partial perspective of what a criminal career is. Albeit scientifically important, the study of criminal careers of sexual and non-sexual femicide perpetrators was beyond the scope of this study. For further details on the criminal career paradigm, see the specialized literature (Piquero et al., 2007; Zara and Farrington, 2016).
Femicide	The killing of a woman *because* she is a woman (Russell and Harmes, 2001). If the target of the violence is a specific woman it is likely that an Intimate Partner Femicide takes place (see below) (Dawson and Gartner, 1998; Gino et al., 2019; Zara et al., 2019).
Intimate Partner Femicide (IPF)	The killing of a woman by a man with whom she had an intimate relationship: husband, ex-husband, life partner, boyfriend, ex-boyfriend, lover, or person with whom she had a child. This also includes the situation where a man murders a girlfriend or acquaintance who refuses to engage in an intimate (emotional and/or sexual) relationship with him (Gellerman and Suddath, 2005). IPF explains *why* and *how* that targeted woman is killed (Campbell et al., 2007).
Sexual Femicide	This is a case in which the death of the woman consists of two main components: femicide and the sexual behavior of the perpetrator. This may involve repressed or displaced anger and sadism (Karakasi et al., 2017). Sexual behavior can occur before, during, and/or after the femicide. This leads to a further distinction: sexualized femicide or grievance femicide (see below), although in some cases there may be an overlap.
Sexualized Femicide	It is functionally related to the sexual element of the offense. In other words, the sexual aspect and the killing (femicide) are closely related. In sexualized femicides, the victims are often unknown (Beauregard and Proulx, 2002; Beech et al., 2005), although perpetrators may have targeted their victims in advance for a specific reason (e.g., prostitutes). Aspects such as sexual fantasies, sexual arousal, masturbation, actual penetration may even be expressed symbolically through further exploitation of the victim's body or genital mutilation (Myers et al., 1999; Meloy, 2000).
Grievance Femicide	It is driven by high emotionality, resentment, and rage schemas in which concern about losing contact with the woman (e.g., fear of being abandoned, deserted or dismissed) in most cases, fear of losing control over her, is expressed through sexualized aggression (Johnson et al., 2017).
Rape	It encompasses sexual violence characterized mainly by aggressive sexualized violence against the victim. Specifically, it can consist either of rape 'only' or rape within Intimate Partner Violence (IPV), where the sexual violence is part of a broader pattern of abuse and assault in the context of (mainly) intimate violence (Bagwell-Gray et al., 2015; Veggi et al., 2021).
Stalking	It implies an obsessive pursue of intimacy, and it is often referred to as a psychosexual obsession. The victim is the focus of stalking. Previous relationships between the victim and stalker have an impact on how the obsessive behavior is framed (Fox et al., 2011). If they had an enduring relationship, it is more likely that the stalker's emotional involvement in the relationship will be stronger (Douglas and Dutton, 2001). In some cases, victims could be strangers. These victims are unaware of any prior contact with their stalker, who may be motivated by a desire for an intimate relationship with the victim or sexual motives. Those targeted by stranger stalkers may be chosen for their physical and sexual attractiveness, social status, vindictive reasons, persecutory thinking, or a fantasized version of the victim. Meloy (1997b) proposed a rating system for stalkers based on acquaintanceship: those who were previously known, those who were previously sexually intimate, and those who were strangers.
Types of relationship (between victim and perpetrator):	
– Known	According to the victimology literature, a victim is considered "known" if victim and perpetrator knew each other for at least more than 24 h prior to the femicide.
– Unknown	A victim is considered "unknown or stranger" if the victim did not know the perpetrator (or vice versa) 24 h before the femicide.
Intensity of relationship:	
– Intimate	An intimate relationship involves an affective and sexual connection between two people which implies a sort of continuity.
– Superficial or Acquaintance	It is a form of relationship based on sporadic contact between two people or limited knowledge about each other.
Quality of relationship:	
– Contentiousness	It implies the presence of psychologically erosive, negative, intense, and enduring emotional strain between people in a relationship (Birkley and Eckhardt, 2015; Zara et al., 2019). Contentiousness can only be assessed if the victim and perpetrator know each other.
– Jealousy	It is an emotion that exposes individuals to extreme dangers, which is why it is considered a dangerous passion (Buss, 2000; Freilone et al., 2020). The dark side of jealousy (often referred to as morbid or pathological) can cause men to explode violently to reduce the likelihood of their partners straying, and exposes women to the risk of being killed. In this study, jealousy was coded as present if the forensic and clinical record mentioned that it was one of the factors identified to explain the violence perpetrated against the victim.
Prostitutes	Prostitutes are sex workers who provide sexual services as a labor or an income-generating activity (Adriaenssens et al., 2016; Dylewski and Prokop, 2021). Sex exchange for money is the object of the transaction between the prostitute, as a provider of a service, and the client. Prostitutes work either with their own client base (e.g., call girls, escorts, and streetwalkers) or on behalf of other individuals or industries that procure clients for them within a lucrative business (e.g., sex clubs) (McGuire and Gruter, 2003). Violence against prostitutes reifies a justification for violence against women and conveys the idea that prostitutes are at their client's disposal (Salfati et al., 2008; Zara et al., 2021), making them more at risk of violence and femicide (Sorochinski and Salfati, 2019).

(Continued)

TABLE 1 (Continued)

Variables	Definitions for coding protocol
Motives for offending	Following the typologies available in the literature and in accordance with the precise information in the forensic files and pathologist's reports, two macro-categories were developed. They distinguish (1) oppressive, domineering, and multi-problematic relationships in which victims were placed in a state of inability to disengage from the perpetrator (Johnson, 2008; Zara and Gino, 2018; Gino et al., 2019) and (2) predatory motives, sexual deviance, and antisociality (Petersson et al., 2019). Motives for offending involving mental disorders are of particular interest in psychological and clinical settings and in the criminal justice system (Zara, 2013). Mental disorders are, however, neither necessary nor sufficient causes of violence (Stuart, 2003). Research shows that serious mental illness of the perpetrator is rarely the cause of violence against women *per se*: when present it is more likely in cases of domestic killing (Oram et al., 2013; Sorrentino et al., 2020; Caman et al., 2022) rather than in cases of sexual offending and IPV (Kelley et al., 2020). Studies on the mental illness in sex offenders show that rates of psychotic diagnoses range from 5 to 10% (Fazel et al., 2007). In this study the mental disorder of the perpetrator involved only a small percentage of cases (see Results section).
Overkill	The definition of overkill employed in this study was bound to the idea of excessiveness of violence, of amount or severity of wounds, and of trauma beyond that necessary to cause death (Zara and Gino, 2018; Trojan et al., 2019; Zara et al., 2019). Overkill was present if the victim sustained multiple injuries within one or more causes of death, i.e., multiple gunshot (at least three) or a combination of multiple gunshot with stab wounds and/or mechanical asphyxia, and if the multiple wounds of the same type involved two or more different body regions and were considered causes of death in each. It is agreed that overkill expresses a rage that is not sated even by the death of the victim. When the victim is for the perpetrator "not dead enough," overkill is likely to emerge.
Weapons	Proper weapons are defined as instruments conventionally designed for combat and intended to inflict physical harm. Firearms and stabbing weapons (e.g., pistols, guns, and knives) are classified as proper weapons. Improper weapons are instruments that are not specifically intended to injure or kill, but can be used to fatally injure a person. Examples of improper weapons include blunt objects (e.g., a stick, a screwdriver) (Pelletier and Pizarro, 2019).
Body Interference or Exploitation	It is any act directed against the victim that leads to further abuse of her body after or during the crime (e.g., using needles on the victim's legs after battering; inserting wire into the victim's body cavities). In some cases, the perpetrator derives gratification from inflicting severe suffering (as a form of torture), to perhaps manifest absolute control over the body of the victim, or killing the victim. In such cases, the exploitation of the body may begin on the living person and continue after death, or it may be practiced after death (Salfati and Taylor, 2017).
Body mutilation	Body mutilation is the deprivation of a limb or other body part or organ, or severe disfigurement (Dorland, 2012; Guggenheimer et al., 2021). It could be seen as offensive mutilation in order to humiliate the victim. Resentment and strong aggression or hatred may cause the aggressor to disfigure the face or genitals (Karger et al., 2000). It could also be seen as a way to facilitate the disposal of the body or to allow the body to be transported and hidden in a place where it would not be noticed and make identification difficult (Braulin, 2002; Di Nunno et al., 2006; Konopka et al., 2007).
Perpetrator's Reactions after crime	The types of reactions of the perpetrator refers to the behavior following the commission of the offense. It is defined as 'active' when the perpetrator flees or attempts to (e.g., running away) or denies his responsibility for the crime. It is defined as 'passive' when the perpetrator confesses the crime or commits suicide soon after the offense.

femicide includes some or all of the following characteristics: threatened physical or sexual violence, economic and cultural violence, and emotional or psychological abuse perpetrated by a man (usually known) to the victim. In most cases, the perpetrator is a current or former intimate partner (Campbell et al., 2007; Neppl et al., 2019; Marco Francia, 2021; Zara et al., 2022). Perhaps, it is the shared history between victim and perpetrator that makes this type of violence escalate to femicide.

Skott et al. (2018) compared sexual femicides[2] with non-sexual femicides in Scotland (United Kingdom). In their study, they examined data from a national police database and compared 89 male sexual femicidal offenders who had killed adult women with 306 male non-sexual femicidal offenders who had also killed adult women. The sexual femicides in their sample appeared to be more likely associated with instrumental aggression and sexual deviance, making sexual femicidal offenders more comparable to sex offenders than to other femicidal offenders.

In a study by Langevin et al. (1988) it was found that victims of non-sexual femicide tended to be older than the two sexual groups, and that sexual femicidal offenders were more likely to attack a female victim compared with non-sexual femicidal offenders. Examining sexual and non-sexual femicidal offenders they have found many differences between these criminal career groups (Langevin et al., 1988).

If sexual femicide differs from non-sexual femicide in terms of victims and perpetrators, this could have important implications not only for future research but also for policy, interventions, and rehabilitation programs for perpetrators.

Another study (Stefańska et al., 2020) suggests that sexual femicide could represent a hybrid offense combining rape and femicide. While rape may serve as a reminder of *sexual proprietariness* of a woman by a man (Wilson and Daly, 1993; Spencer and Stith, 2020), femicide may serve as the ultimate form of revenge for certain types of abusive and controlling personalities (Serran and Firestone, 2004). The combination of

2 Considering that the victims were exclusively women and the perpetrators exclusively men, we are confident that it is appropriate to speak of sexual and non-sexual femicides when referring to this study, even though Skott et al. (2018) used the general term "homicide."

rape and femicide is the most prevalent form of sex-related killing (Geberth, 2016) intensified by the intimacy of the relationship (Geberth, 2018).

Given that several studies (Salfati and Canter, 1999; Salfati, 2000; Beauregard et al., 2018; Skott et al., 2018) have found more similarities than differences between sexual femicide offenders and rapists, it is plausible that sexual femicide should be considered an extreme variant of rape rather than a sexual variant of femicide.

Hence, according to Stefańska et al. (2021), understanding that hybrid should be the primary focus of psychological investigation.

This study

This study examines cases of violence against women in northern Italy, focusing on sexual and non-sexual femicides and comparing them with rape that does not result in femicide.

The aim is threefold. Firstly, to explore similarities and differences in femicides: femicides that include sexualized violence and femicides that are not sexualized. Secondly, to analyze types of sexual femicides and to explore whether certain factors are more likely involved in either sexualized or grievance femicides. Thirdly, to compare cases in which rape is acted out without the escalation into femicide with cases in which rape is also a key part of the femicide dynamic. The interest is to see the extent to which femicides, sexual and non-sexual, in Italy involve the same risk and criminogenic factors of other forms of violence against women such as rape.

According to our knowledge, this is the first time a comparative study of different forms of VaW (non-sexual femicide vs. sexual femicide vs. rape) was conducted in Italy. While we are aware that violence against women is rarely a discrete event, especially when the victim knows the perpetrator and has a relationship with him, as shown in other studies (Flynn and Graham, 2010; Davies et al., 2015), this study sheds light on the seriousness of any forms of violence above and beyond what is considered the most dramatic aspect of it: death.

Research questions

This study addresses the following questions:

(1) Are sexual and non-sexual femicides more similar or different in terms of victims, perpetrators, and characteristics of the exhibited violence?
(2) Are all sexual femicides of the same kind?
(3) What do sexual femicides have in common with rape?
(4) What do non-sexual femicides have in common with rape?

Materials and methods

Data collection and information for the study

The data used in this study were collected from a multisite project[3].

The first phase of the study consisted in identifying the victims of femicide; information about age, profession, previous criminal records, prior involvement in violence, dynamics of the femicide; types of relationships between victims and perpetrators were also gathered.

Information on further exploitation of victims' bodies and mutilation, as stated in the pathology reports, was collected. Forensic files from the Court of Turin were also examined, along with files from the archive of the medical experts who assessed the cases. This multisite study excluded all cases of women's natural death or suicide.

In order to be able to explore differences between sexual femicides and rape that did not lead to the death of the victim, cases of sexual offending perpetrated by men against women, i.e., rape were examined.

Variables

All information collected was classified according to the following dimensions: age, nationality and occupation of the victim and the perpetrator, location of the violence (e.g., at home: either in the victim's or the perpetrator's home; in a public place: usually in an isolated/secluded place in the outskirt of a city or town), medico-legal aspects of the murder (e.g., weapons used, substance abuse, i.e., alcohol and/or drugs, body mutilation and other forms of exploitation of the victim's body), the perpetrator's reaction after the crime (e.g., active vs. passive), the types of sexual femicides (e.g., sexualized femicide or grievance femicide). The type (known vs. unknown), intensity (intimate vs. acquaintance/superficial), duration of the relationship between victim and perpetrator (short- to medium-term vs. long-term), and the possible presence of children provided researchers with information to examine the context in which the crime occurred and to distinguish between sexual femicide, non-sexual femicide, and rape (see **Table 1** for details).

In addition, contentiousness between victim and perpetrator and morbid jealousy were examined. These dimensions are relevant to assessing (1) the presence of violent incidents previously reported to the police, along with a pattern of

3 Data on femicide were collected at the Institute of Legal Medicine and at the Archive of the Morgue of Turin and they are part of a longitudinal research project on VaW (Zara and Gino, 2018). Data on rape are from the SORAT (Sex Offending Risk Assessment and Treatment) project (Zara, 2018). All data were anonymized and made unidentifiable; data were also numerically coded for statistical purposes.

frequent violent rows (contentiousness); (2) the dynamics of femicide and rape by examining the role of possessiveness, intrusive control, and obsessive desire for intimate exclusivity (morbid jealousy) in triggering the violence. In examining femicide, overkill (i.e., excessive force beyond what is necessary to cause death) was also considered.

Data coding

Variables related to victims and perpetrators (such as age, nationality, and profession), locations of crime (e.g., indoor or outdoor), and the medico-legal aspects of the offense (e.g., body exploitation) were directly extrapolated from the scientific and forensic material available. Variables related to the violence dynamics were coded by two independent judges. Coding protocols used to formulate each specific variable are extremely relevant for reconstructing the data into a coherent framework, to explain the meaning of each variable endorsed and to differentiate them. Behavioral variables were dichotomized (see later for the rationale behind dichotomization) into either present or absent. This procedure identified 18 variables related to victim-perpetrator relationships, motive, and context of violence, as well as the variable "criminal career" that is here measured by criminal history recorded in the forensic file.

Regarding the quality of the relationship, contentiousness implies the presence of negative, intense, erosive and enduring emotional strain between people in a relationship (Birkley and Eckhardt, 2015). According to Jordan et al. (2010), overkill is described as the excessive use of force that goes further than what is necessary to kill. It involves multiple injuries and results in one or more causes of death or multiple wounds distributed over two or more regions of the body (Salfati, 2003; Trojan et al., 2019).

Table 1 summarizes the variables explored, accompanied by the coding definition.

Body exploitation implies interferences with the body of the victim, either when alive (as in the case of sex offending) or once dead (as in the case of femicide). In some cases, the perpetrator derives gratification (including sexual arousal and satisfaction) from inflicting severe suffering. In such cases, the exploitation of the body may begin on the living person and continue after death, or it may be practiced after death (see **Table 1** for a detailed description).

Body mutilation was based on the pathologist reports and was assessed as present (1) or absent (0). In line with the medical literature (Guggenheimer et al., 2021), mutilation was defined as the deprivation of a limb or another body part or organ, or severe disfigurement. This could be seen as offensive mutilation and is likely done to humiliate the victim. Resentment and strong aggression or hatred may cause the aggressor to disfigure the face or genitals (Karger et al., 2000). In such cases it could happen that the victim is not killed.

Regarding motives for killing, two macro-categories were developed according to the typologies available in literature that distinguish an oppressive, domineering and multiproblematic relational condition (coded as 0) (Holtzworth-Munroe and Stuart, 1994; Johnson, 2008), and predatory motives, sexual deviance and antisociality (coded as 1) (Petersson et al., 2019).

In order to explore the extent to which sexuality was a key element of the killing when comparing victims, sexual femicides (Higgs et al., 2017) were operationalized into *grievance femicides* (coded as 0) and *sexualized femicides* (coded as 1). A femicide was coded as *grievance* when it was driven by high emotionality, resentment, and anger. A femicide was coded as *sexualized* when there was forensic evidence that it was functionally related to the sexual element of the offense (Beech et al., 2005) (see **Table 1** for a detailed description).

Two independent raters carried out the categorization of data into the assessment of contentiousness, overkill, body exploitation, motives of crime, and grievance or sexualized femicide. Separate variables were created to indicate the presence (coded as 1) or absence (coded as 0) of assessed dimensions in each case. When a discrepancy emerged, the two independent raters discussed the case with the research group, and re-assessed it, until a better level of agreement was reached. The Cohen's Kappa statistic (Cohen, 1960) provides a quantitative measure of the magnitude of agreement between observers that is corrected for chance, and it is appropriate for this type of data. The levels of agreement for the category of contentiousness (Cohen's K was 0.98, $p < 0.001$), for the category 'overkill' (Cohen's K was 0.98, $p < 0.001$), for the category of type of reaction by the perpetrator after the crime (Cohen's K was 0.99, $p < 0.001$), for the category of type of body exploitation (Cohen's K was 0.96, $p < 0.001$), for the category 'motives of crime' (Cohen's K was 0.99, $p = 0.001$), for the category of sexual femicide (Cohen's K was 0.97, $p = 0.001$) and for the categories of grievance and sexualized femicide (Cohen's K was 0.98, $p = 0.001$), suggest a substantial inter-rater agreement coefficient for all of these variables (Viera and Garrett, 2005; McHugh, 2012).

Analytical strategy

Descriptive and multivariate analyses with Odds Ratios (ORs) were carried out to explore specifically the characteristics of the sample involved and to provide an outlet for comparing: (1) sexual femicide and non-sexual femicide with rape; and (2) sexual femicide and non-sexual femicide with the subcomponents of rape: rape within IPV and rape 'only.'

Specifically, 18 variables were examined and the OR was calculated to identify which of the 18 variables significantly and independently explained these types of violence. Also explored was whether the type of relationship between victim and perpetrator (known vs. unknown), and the intensity of

the relationship (intimate vs. superficial/acquaintance) could affect the kind of violence the victim endured. The OR provides information about the existence, direction, and strength of an association between target and comparison groups regarding the likelihood of an event occurring (Farrington and Loeber, 2000). When ORs are higher than 1, situations characterized by that particular attribute have relatively higher odds of occurring than those that do not have that attribute (Zara and Farrington, 2020).

Sample

A total of 500 cases of VaW were selected and included in the sample. Specifically, the sample included 365 cases of femicide and 135 cases of rape. **Figure 1** provides a detailed overview of the sample composition and distribution.

Perpetrators (n = 468) were on average 40.81 years old (SD = 15.65), mainly Italians (72.2%; n = 288) and employed at the time of the offense (64.2%; n = 235). Of them, more than a third had previous official criminal records (37.1%; n = 181). In only 6.1% of cases (n = 30) did the perpetrators suffer from a mental illness at the time of the crime, according to forensic psychiatric examinations.

In the present study, victims were also predominantly Italians (76.3%; n = 380) and professionally occupied (61.5%; n = 251). Victims were slightly older (M = 42.49 years old; SD = 20.16) than their perpetrators, but the difference was not significant, $t(811) = 1.314$, $p = 0.09$ ($d = 0.09$)[4].

Table 2 summarizes the general information about the sample.

Perpetrators of sexual femicide were on average significantly younger (M = 34.45 years old; SD = 11.22) than perpetrators of non-sexual femicide (M = 45.10 years old; SD = 17.22), $t(256) = 4.01$, $p < 0.001$ ($d = 0.65$), while no difference emerged when compared with perpetrators of rape (M = 35.78; SD = 11.14), $t(179) = -0.70$, $p = 0.49$ ($d = 0.12$). Perpetrators of rape were significantly younger than perpetrators of non-sexual femicide, $t(345) = 5.59$, $p = 0.001$ ($d = 0.62$).

Victims of sexual femicide were younger (M = 34.16 years old; SD = 16.24) than victims of non-sexual femicide (M = 48.50 years old; SD = 20.53), $t(360) = 5.98$, $p < 0.001$ ($d = 0.73$). When comparing victims of sexual femicide with victims of rape (M = 30.40 years old; SD = 13.11), the former were slightly older than the latter, $t(161) = 1.61$, $p = 0.06$ ($d = 0.25$).

Victims of rape were also significantly younger than victims of non-sexual femicide, $t(347) = 7.24$, $p = 0.001$ ($d = 0.94$).

4 According to Cohen (1992), values of effect size are interpreted as follows:
0.20 = small effect.
0.50 = medium effect.
0.80 = large effect.

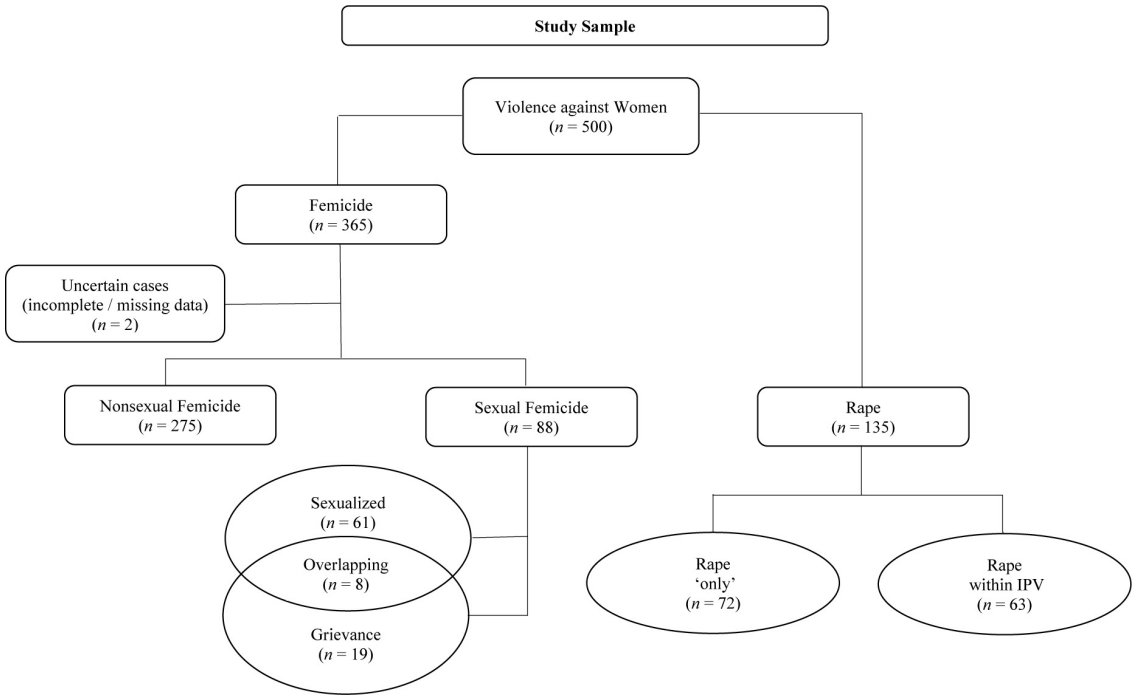

FIGURE 1
Flow diagram of different forms of violence against women involved in the study sample.

TABLE 2 Sample: Socio-demographic description of victims and perpetrators.

	Victims (n = 500)	
	n	M (SD) or %
Victims		
Age	439	42.49 (20.16)
Nationality		
Italian	380	76.3%
Foreigner	118	23.7%
Profession		
Employed	251	61.5%
Unemployed/Retired	157	38.5%
	Perpetrators (n = 468)	
Perpetrators		
Age	374	40.81 (15.65)
Nationality		
Italian	288	72.2%
Foreigner	111	27.8%
Profession		
Employed	235	64.2%
Unemployed	131	35.8%
Previous criminal records		
Yes	181	37.1%
No	307	62.9%
Mental illness		
Yes	30	6.1%
No	458	93.9%

Data regarding some variables were missing and this can explain why percentages do not always refer to the whole sample of 500 victims and 468 perpetrators studied.

Results

This study explored similarities and differences in looking first at sexual and non-sexual femicides. It also explored more specifically types of sexual femicides and explored whether certain factors were more likely involved in sexualized rather than in grievance femicide and vice versa. It finally compared cases in which rape was perpetrated without the escalation to femicide with cases in which it was, instead, a key part of the femicide dynamic.

Findings suggest that 500 victims were either killed (n = 365) or raped (n = 135) by 468 perpetrators. Overall, the great majority of the victims were known (67.7%; n = 335) to the perpetrator, while in 32.3% of cases (n = 160) the victims were unknown. In five cases it was not possible to establish whether the victims were known or unknown.

When the victim and the perpetrator knew each other, in 71.3% of cases (n = 239) they were in an intimate relationship, characterized by emotional, affective and sexual involvement. On average the intimate relationship was nearly 13 years long (M = 12.62; SD = 13.11; Range: 0.01–24.13). In 53.5% of cases (n = 174) the relationship was characterized by contentiousness.

Comparing sexual femicide and non-sexual femicide

As shown in Table 3, the risk for women of being killed by a known perpetrator was lower in the case of sexual femicide (25.0%; n = 22) than in non-sexual femicide (82.4%; n = 224) (OR = 0.07; 95% CI = 0.04–0.13). When the victim knew the perpetrator, the intensity of the relationship with him (intimate vs. non-intimate, i.e., acquaintance/superficial) did not make any difference in how the woman was killed, either by a sexual femicide (72.7%; n = 16) or by a non-sexual femicide (70.5%; n = 158).

However, some differences emerged in the duration of the relationship. The relationship between the victim and perpetrator was shorter for sexual femicide than for non-sexual femicide[5] (OR = 0.25; 95% CI = 0.09–0.71). The victim and perpetrator were less likely to live together (cohabitation) in the case of sexual femicide than in non-sexual femicide (OR = 0.04; 95% CI = 0.01–0.13), a finding that is consistent with the fact that sexual femicide was more likely to have occurred in public places rather than at home (OR = 0.13; 95% CI = 0.08–0.23). Looking at the quality of the relationship, contentiousness (OR = 0.14; 95% CI = 0.07–0.30) and morbid jealousy (OR = 0.36; 95% CI = 0.13–0.94) were less likely to influence sexual femicide than non-sexual femicide. No difference was found regarding stalking (see Table 3 and the Supplementary material for a detailed description of these results)[6].

In sexual femicide, children were less likely to witness the violence than in non-sexual femicide, where children unfortunately witnessed the violence that led to their mothers' femicide (OR = 0.11; 95% CI = 0.01–0.81).

When looking at the dynamic of violence, in sexual femicides it was more likely that the motives behind the violence were predatory or antisocial in comparison with non-sexual femicide (OR = 10.28; 95% CI = 2.14–5.94). It was more likely that sexual femicides occurred in a remote and secluded place in the outskirt of a city, in comparison with non-sexual femicides (OR = 0.13; 95% CI = 0.08–0.23). Perpetrators of sexual femicides more likely used an improper weapon (e.g., blunt objects) to kill in comparison with non-sexual femicides (OR = 3.56; 95% CI = 2.14–5.94), and also were eight times

5 On average the length of relationship between the victim and perpetrator was 6.02 years long (SD = 8.07) in the case of sexual femicide, and 15.06 years long (SD = 14.08) for non-sexual femicide, $t(195) = 2.53$, $p = 0.01$, ($d = 0.66$).
On average the length of relationship between the victim and perpetrator was longer in the case of femicide, than for rape (M = 9.62; SD = 10.61), $t(263) = 3.15$, $p = 0.001$, ($d = 0.42$).
The length of relationship between the victim and perpetrator was slightly shorter (M = 6.02; SD = 8.07) in the case of sexual femicide, than for rape, $t(98) = -1.29$, $p = 0.01$, ($d = 0.35$).

6 A graphical representation of the comparative results of sexual vs. non-sexual femicides vs. rape can be found in the Supplementary material (see Graph 1a, 1b, and 1c).

TABLE 3 Comparisons of sexual femicide versus non-sexual femicide versus rape.

Variables	Sexual femicide (A) *n* = 88	Non-sexual femicide (B) *n* = 275	Rape (C) *n* = 135	Odds Ratios (95% CI) A/B	Odds Ratios (95% CI) A/C	Odds Ratios (95% CI) B/C
Type of victims						
Known (1)/Unknown victims (0)	25.0% (*n* = 22)	82.4% (*n* = 224)	65.9% (*n* = 89)	0.07 (95% CI = 0.04–0.13)***	0.17 (95% CI = 0.10–0.31)***	2.41 (95% CI = 1.50–3.87)***
Criminal careers of perpetrator						
Previous criminal records: yes (1)/no (0)	34.5% (*n* = 30)	25.4% (*n* = 67)	62.2% (*n* = 84)	1.55 (95% CI = 0.92–2.61)	0.32 (95% CI = 0.18–0.56)***	0.21 (95% CI = 0.13–0.32)***
Type of relationships						
Prostitutes (1)/Non-prostitutes (0)	77.3% (*n* = 68)	10.5% (*n* = 29)	12.6% (*n* = 17)	28.84 (95% CI = 15.36–54.14)***	23.60 (95% CI = 11.58–48.10)***	0.82 (95% CI = 0.43–1.55)
Intimate (1)/Acquaintance—Superficial (0) Relationships	72.7% (*n* = 16)	70.5% (*n* = 158)	73.0% (*n* = 65)	1.11 (95% CI = 0.42–2.97)	0.99 (95% CI = 0.35–2.81)	0.88 (95% CI = 0.51–1.53)
Characteristics of relationships						
Duration of relationships: Long: 10 years plus (1)/Short-Medium: up to 9 years (0)	23.8% (*n* = 5)	55.7% (*n* = 102)	37.2% (*n* = 32)	0.25 (95% CI = 0.09–0.71)**	0.53 (95% CI = 0.18–1.58)	2.13 (95% CI = 1.26–3.59)**
Victim/Perpetrator Cohabitation: yes (1)/no (0)	4.5% (*n* = 3)	54.5% (*n* = 139)	44.4% (*n* = 60)	0.04 (95% CI = 0.01–0.13)***	0.06 (95% CI = 0.02–0.20)***	1.50 (95% CI = 0.99–2.28)†
Contentiousness: yes (1)/no (0)	15.6% (*n* = 10)	56.5% (*n* = 122)	31.1% (*n* = 42)	0.14 (95% CI = 0.07–0.30)***	0.41 (95% CI = 0.19–0.88)*	2.87 (95% CI = 1.83–4.52)***
Morbid jealousy: yes (1)/no (0)	10.9% (*n* = 5)	25.5% (*n* = 60)	25.3% (*n* = 24)	0.36 (95% CI = 0.13–0.94)*	0.36 (95% CI = 0.13–1.02)†	1.01 (95% CI = 0.59–1.75)
Stalking: yes (1)/no (0)	4.4% (*n* = 2)	12.0% (*n* = 28)	6.7% (*n* = 9)	0.34 (95% CI = 0.08–1.49)	0.65 (95% CI = 0.14–3.13)	1.90 (95% CI = 0.87–4.16)
Children involved (1)/not involved (0) in violence	3.3% (*n* = 1)	24.4% (*n* = 42)	46.9% (*n* = 30)	0.11 (95% CI = 0.01–0.81)*	0.04 (95% CI = 0.01–0.30)***	0.37 (95% CI = 0.20–0.67)**
Motives for offending						
Predatory—Antisociality (1)/Oppressive—Multiproblematic Relationships (0)	84.1% (*n* = 74)	34.0% (*n* = 90)	53.3% (*n* = 72)	10.28 (95% CI = 5.50–19.21)***	4.63 (95% CI = 2.38–8.98)***	0.45 (95% CI = 0.30–0.69)***
Context of violence occurrence						
Home (victim's or perpetrator's) (1)/Public Places (0)	31.0% (*n* = 27)	77.1% (*n* = 209)	65.2% (*n* = 88)	0.13 (95% CI = 0.08–0.23)***	0.24 (95% CI = 0.14–0.43)***	1.80 (95% CI = 1.14–2.83)*
Aggravating factors						
Overkill: yes (1)/no (0)	47.7% (*n* = 42)	42.9% (*n* = 118)	–	1.22 (95% CI = 0.75–1.97)	–	–
Substance use by the perpetrator: yes (1)/no (0)	15.9% (*n* = 14)	12.4% (*n* = 34)	53.3% (*n* = 72)	1.34 (95% CI = 0.68–2.63)	0.17 (95% CI = 0.09–0.32)***	0.12 (95% CI = 0.08–0.20)***
Weapons: improper (1)/proper (0)	66.7% (*n* = 58)	36.0% (*n* = 96)	38.9% (*n* = 21)	3.56 (95% CI = 2.14–5.94)***	3.14 (95% CI = 1.55–6.37)**	0.88 (95% CI = 0.48–1.61)
Body Exploitation: yes (1)/no (0)	53.4% (*n* = 47)	12.4% (*n* = 34)	3.7% (*n* = 5)	8.13 (95% CI = 4.68–14.11)***	29.81 (95% CI = 11.11–79.94)***	3.67 (95% CI = 1.40–9.61)**

(Continued)

TABLE 3 (Continued)

Variables	Sexual femicide (A) *n* = 88	Non-sexual femicide (B) *n* = 275	Rape (C) *n* = 135	Odds Ratios (95% CI) A/B	Odds Ratios (95% CI) A/C	Odds Ratios (95% CI) B/C
Body Mutilation: yes (1)/no (0)	15.9% (*n* = 14)	1.8% (*n* = 5)	3.7% (*n* = 5)	10.22 (95% CI = 3.56–29.28)***	4.92 (95% CI = 1.70–14.20)**	0.48 (95% CI = 0.14–1.69)
Perpetrator's Reaction after Crime: active (1)/passive (0)	94.8% (*n* = 73)	44.6% (*n* = 111)	94.1% (*n* = 127)	22.69 (95% CI = 8.04–64.00)***	1.15 (95% CI = 0.34–3.95)	0.05 (95% CI = 0.02–0.11)***

Rape in this study complies cases of rape 'only' and cases of rape within IPV. Percentages exclude missing values. Column percentage are shown. CI, confidence interval. $^{\dagger}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$. See **Supplementary material** for a graphical representation of these results (Graph 1a, 1b, and 1c).

more likely to exploit the body of the victims even after the killing (OR = 8.13; 95% CI = 4.68–14.11). Furthermore, body mutilation was ten times higher in sexual femicide than in non-sexual femicide (OR = 10.22; 95% CI = 3.56–29.28). In sexual femicide perpetrators were more likely than in non-sexual femicide to escape after committing the crime (i.e., active reaction), in an attempt to avoid punishment (OR = 22.69; 95% CI = 8.04–64.00).

No difference was found in their criminal careers (e.g., previous criminal records) between sexual and non-sexual femicidal offenders (see **Table 3** for details on these results).

Contrary to expectations, overkill *per se* was not significant in distinguishing sexual from non-sexual femicides. However, a separate analysis comparing known with unknown victims of femicide showed that the former (73.0%; *n* = 116) were at higher risk for overkill than the latter (54.7%; *n* = 130) (OR = 1.47; 95% CI = 0.94–2.32).

The psychology of sexual femicides

Of the 365 victims of femicides included in this study, 88 were women killed because of sexual femicide. For two cases of femicides it was not possible to establish whether the femicide was of a sexual nature or not.

Twenty-five percent (*n* = 22) of these victims were known to the perpetrator. As mentioned before, among these known victims, 72.7% (*n* = 16) had an intimate relationship with the perpetrator, although this relationship rarely lasted more than a decade (23.8%; *n* = 5) and only in a few cases (4.5%; *n* = 3) involved cohabitation between them (see Endnote 3). In 10.9% of cases (*n* = 5) the relationship was characterized by morbid jealousy and in 15.6% of cases (*n* = 10) by contentiousness. In only one case did sexual femicide occur in the presence of the victim's children (3.3%; *n* = 1).

As shown in **Table 3**, in 77.3% of sexual femicides the victims involved were prostitutes (*n* = 68) in comparison with 10.5% of prostitutes (*n* = 29) in non-sexual femicides (OR = 28.84; 95% CI = 15.36–54.14) and with 12.6% of prostitutes (*n* = 17) in rape (OR = 23.60; 95% CI = 11.58–48.10). No significant differences emerge when comparing non-sexual femicides with rape.

Are all sexual femicides of the same kind?

Looking specifically at the types of sexual femicide, we found that the vast majority of cases were sexualized femicides (76.1%; *n* = 67), while 23.9% (*n* = 21) were grievance femicides. **Table 4** shows these results.

In 8 cases it was possible to identify an overlap between sexualized and grievance characteristics, albeit with a prevalence of characteristics typical of one or the other category. Although only involving a few cases, in 6 out of 8 cases the overlapping occurred when the victim was unknown and a prostitute.

When comparing sexualized with grievance femicides some significant differences emerged. Sexualized (90.9%; *n* = 60) in comparison with grievance (9.1%; *n* = 6) femicides more likely involved unknown victims (OR = 0.05; 95% CI = 0.01–0.16). When the victim and perpetrator knew each other, their relationship was characterized by a lower level of contentiousness in sexualized femicide (4.4%; *n* = 2) in comparison with grievance femicide (42.1%; *n* = 8) (OR = 0.06; 95% CI = 0.01–0.35). Prostitutes were more likely the victims of sexualized (88.1%; *n* = 59) than grievance femicides (42.9%; *n* = 9) (OR = 9.83; 95% CI = 3.16–30.65). Motives for sexualized femicides were mostly antisocial, characterized by sexual deviance, in comparison with grievance femicides in which the oppressive component of the relationship prevailed (OR = 9.30; 95% CI = 2.65–32.65).

No difference was found when compared the criminal careers of sexual and non-sexual femicidal offenders.

Comparing sexual femicides and rape

When looking in more detail at all the forms of violence analyzed in this study, some interesting results emerge.

What do sexual femicides have in common with rape?

Sexual femicides were more likely to be committed by an unknown man in an anonymous setting, in comparison with

TABLE 4 Comparisons of grievance femicide versus sexualized femicide.

Variables	Sexual femicide		Odds Ratios (95% CI)
	Grievance femicide (A) $n = 21$	Sexualized femicide (B) $n = 67$	A/B
Type of victims			
Known (1)/Unknown victims (0)	68.2% ($n = 15$)	31.8% ($n = 7$)	0.05 (95% CI = 0.01–0.16)***
Criminal careers of perpetrator			
Previous criminal records: yes (1)/no (0)	42.9% ($n = 9$)	31.8% ($n = 21$)	0.62 (95% CI = 0.23–1.70)
Type of relationships			
Prostitutes (1)/Non-prostitutes (0)	42.9% ($n = 9$)	88.1% ($n = 59$)	9.83 (95% CI = 3.16–30.65)***
Intimate (1)/Acquaintance—Superficial (0) Relationships	86.7% ($n = 13$)	42.9% ($n = 3$)	0.16 (95% CI = 0.01–0.95)
Characteristics of relationships			
Duration of relationships:Long: 10 years plus (1)/Short-Medium: up to 9 years (0)	30.8% ($n = 4$)	12.5% ($n = 1$)	0.32 (95% CI = 0.03–3.56)
Victim/Perpetrator Cohabitation: yes (1)/no (0)	10.0% ($n = 2$)	2.2% ($n = 1$)	0.20 (95% CI = 0.02–2.35)
Contentiousness: yes (1)/no (0)	42.1% ($n = 8$)	4.4% ($n = 2$)	0.06 (95% CI = 0.01–0.35)***
Morbid jealousy: yes (1)/no (0)	22.2% ($n = 4$)	3.6% ($n = 1$)	0.13 (95% CI = 0.01–1.27)
Stalking: yes (1)/no (0)	11.8% ($n = 2$)	3.6% ($n = 1$)	0.28 (95% CI = 0.02–3.32)
Children involved (1)/not involved (0) in violence	28.6% ($n = 6$)	33.8% ($n = 22$)	1.80 (95% CI = 0.44–3.76)
Motives for offending			
Predatory/Antisociality (1)—Oppressive/Multiproblematic Relationships (0)	57.1% ($n = 12$)	92.5% ($n = 62$)	9.30 (95% CI = 2.65–32.65)***
Context of violence occurrence			
Home (victim's or perpetrator's) (1)/Public Places (0)	33.3% ($n = 7$)	30.3% ($n = 20$)	0.87 (95% CI = 0.31–2.48)
Aggravating factors			
Overkill: yes (1)/no (0)	57.1% ($n = 12$)	44.8% ($n = 30$)	0.61 (95% CI = 0.23–1.64)
Substance use by the perpetrator: yes (1)/no (0)	14.3% ($n = 3$)	16.4% ($n = 11$)	1.18 (95% CI = 0.30–4.70)
Weapons: improper (1) vs. proper (0)	57.1% ($n = 12$)	69.7% ($n = 46$)	1.73 (95% CI = 0.63–4.74)
Body Exploitation: yes (1)/no (0)	42.9% ($n = 9$)	56.7% ($n = 38$)	1.75 (95% CI = 0.65–4.70)
Body Mutilation: yes (1)/no (0)	0.05% ($n = 1$)	20.9% ($n = 14$)	5.28 (95% CI = 0.65–42.84)
Perpetrator's Reaction after Crime: passive (0)/active (1)	85.7% ($n = 18$)	98.2% ($n = 55$)	9.17 (95% CI = 0.90–93.74)

Percentages exclude missing values. Percentages exclude missing values. Column percentage are shown. CI, confidence interval. $^{\dagger}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

rape, in which the perpetrator knew the victim (OR = 0.17; 95% CI = 0.10–0.31). In sexual femicide, the relationship between the victim and perpetrator was less likely characterized by contentiousness than in cases of rape (OR = 0.41; 95% CI = 0.19–0.88). The victim and perpetrator were less likely to live together in cases of sexual femicide compared with rape (OR = 0.06; 95% CI = 0.02–0.20). The intensity of the relationship between victim and perpetrator (i.e., intimacy) was not significantly different in the cases of sexual femicides and rape. The duration of their relationship, jealousy and stalking were not significant in differentiating when comparing sexual femicides and rape.

Typically, sexual femicide tended to occur more likely in secluded spaces (OR = 0.24; 95% CI = 0.14–0.43) in comparison with rape, that occurred more likely in either the victim's or the perpetrator's home. Substance abuse by the perpetrator around the time of the violence was more likely in rape than in sexual femicide (OR = 0.17; 95% CI = 0.09–0.32).

The use of improper weapons was more likely in sexual femicide than rape (OR = 3.14; 95% CI = 1.55–6.37). Body exploitation (OR = 29.81; 95% CI = 11.11–79.94) and body mutilation (OR = 4.92; 95% CI = 1.70–14.20) were more likely to occur in sexual femicide than in rape (see Table 3 for a detailed overview of the results). No difference was found in the types of reaction of the perpetrator after the crime.

Comparing non-sexual femicides and rape

What do non-sexual femicides have in common with rape?

Knowing the perpetrator (OR = 2.41; 95% CI = 1.50–3.87), and being in a long relationship with him (OR = 2.13; 95% CI = 1.26–3.59) was more likely in non-sexual femicides rather than in rape (see note 3). When looking at the intensity of the relationship between victim and perpetrator (i.e., intimacy), no

differences were found when comparing non-sexual femicides with rape. The risk for children witnessing the violence was strongly increased in those cases in which their mother was raped rather than killed (OR = 0.37; 95% CI = 0.20–0.67).

It was more likely that an oppressive relationship was behind the motives for non-sexual femicide rather than rape (OR = 0.45; 95% CI = 0.30–0.69). Non-sexual femicides were more likely committed at home in comparison with rape (OR = 1.80; 95% CI = 1.14–2.83). As expected, substance use by the perpetrator was more frequent in rape than in non-sexual femicide (OR = 0.12; 95% CI = 0.08–0.20).

The exploitation of the victim's body was almost four times more likely in the case of non-sexual femicide rather than in rape (OR = 3.67; 95% CI = 1.40–9.61), while an active reaction of the perpetrator after the violence was more frequent in rape rather than in non-sexual femicide (OR = 0.05; 95% CI = 0.02–0.11). No difference was found for body mutilation. All these findings are shown in **Table 3**.

Looking at these findings, and in line with previous studies (Krantz and Garcia-Moreno, 2005; Fernandez, 2011) it is noticeable that rape is part of a form of combined violence against women because it emerges either as a form of sexual violence within IPV or as the prevalent form of violence (rape 'only').

Looking for similarities and differences between sexual and non-sexual femicides and rape

These findings suggest that while sexual and non-sexual femicides share the killing of the victims, some aspects could make them more criminogenically closer to rape.

What do sexual femicides have in common with rape 'only' and rape within IPV?

As reported in **Table 5**, when comparing sexual femicide with either rape within IPV or rape 'only' some interesting findings emerged respectively. For instance, sexual femicides were more likely to differ from rape within IPV, because victims were more likely to be unknown while the victims of rape within IPV were more likely to be intimate, involved in an oppressive and contentious relationship with the perpetrator; often violence occurred in the presence of children and at home. Perpetrators of rape within IPV were more likely to have criminal records than for sexual femicide.

Table 5 reports all results of this comparative analysis.

On the other hand, sexual femicide and rape 'only' involved mostly unknown victims. They were more likely to occur in public places and mainly for predatory and antisocial motives. In those cases of rape 'only,' it was more likely that the perpetrator was under the effect of alcohol or drugs. These offenders had also more previous criminal records in comparison with sexual femicidal offenders.

What do non-sexual femicides have in common with rape 'only' and rape within IPV?

Non-sexual femicides were similar to rape within IPV because both involved victims and perpetrators in a longer relationship, characterized by high level of contentiousness between them, and morbid jealousy. However, there were some differences when looking at the motives for violence which were more likely to be predatory and antisocial in non-sexual femicide than in rape within IPV. Perpetrators of rape within IPV were more likely to report previous criminal records. It was more likely that rape within IPV occurred at home and that abuse of substance was involved (see **Table 5** for the details regarding these results).

Non-sexual femicides differently from rape 'only' involved known victims and were more likely to have occurred within an oppressive and multiproblematic relationship. Body exploitation was more likely in the cases of non-sexual femicide suggesting the use of some forms of torture during the violence.

It is interesting to note that perpetrators of non-sexual femicide were more likely to admit the crime in comparison with perpetrators of both rape within IPV and rape 'only,' who more likely either denied or escaped from the crime scene (see **Table 5**).

Discussion

This study examines cases of violence against women in northern Italy, focusing on sexual and non-sexual femicides and comparing them with rape (rape within IPV and rape 'only') (see **Figure 1** for a summary of these forms of violence). Rape by itself or in combination with IPV or femicide, i.e., sexual femicide, means the violation of the most intimate dimension of a person: her own sexuality.

The results presented here, in line with other research findings (Campbell et al., 2003; Veggi et al., 2021), show that these types of violence against women reveal interesting similarities regarding types of victims, and the turbulent, oppressive, and domineering relationships with their perpetrators.

Sexual femicides exhibited a specific pattern in terms of victims (more likely to be unknown), of motives (more likely to be antisocial and sexually deviant), of characteristics of the crime dynamic (more likely to occur in secluded locations), and of perpetrators who were more likely to use improper weapons and to escape from the crime scene compared to non-sexual femicides. Sexual femicides also shared some similarities with rape, particularly regarding victim only known superficially or only involved in a short-term relationship with the perpetrator.

TABLE 5 Comparisons of sexual femicide and non-sexual femicide with rape within IPV and rape 'only.'

Variables	Sexual femicide (A) *n* = 88	Rape within IPV (B) *n* = 63	Rape 'only' (C) *n* = 72	Odds Ratios (95% CI) A/B	Odds Ratios (95% CI) A/C	Non-sexual femicide (A) *n* = 275	Rape within IPV (B) *n* = 63	Rape 'only' (C) *n* = 72	Odds Ratios (95% CI) A/B	Odds Ratios (95% CI) A/C
Type of victims										
Known (1)/Unknown victims (0)	25.0% (*n* = 22)	98.4% (*n* = 62)	37.5% (*n* = 27)	0.01 (95% CI = 0.00–0.04)***	0.56 (95% CI = 0.28–1.10)	82.4% (*n* = 224)	98.4% (*n* = 62)	37.5% (*n* = 27)	0.08 (95% CI = 0.01–0.56)**	7.78 (95% CI = 4.40–13.75)***
Criminal careers of perpetrator										
Prostitutes (1)/Non-prostitutes (0)	77.3% (*n* = 68)	7.9% (*n* = 5)	16.7% (*n* = 12)	39.44 (95% CI = 13.93–111.66)***	17.00 (95% CI = 7.67–37.66)***	10.5% (*n* = 29)	7.9% (*n* = 5)	16.7% (*n* = 12)	1.37 (95% CI = 0.51–3.69)	0.59 (95% CI = 0.28–1.22)
Previous criminal records: yes (1)/no (0)	34.5% (*n* = 30)	55.6% (*n* = 35)	68.1% (*n* = 49)	0.42 (95% CI = 0.22–0.82)*	0.25 (95% CI = 0.13–0.48)***	25.4% (*n* = 67)	55.6% (*n* = 35)	68.1% (*n* = 49)	0.27 (95% CI = 0.15–0.48)***	0.16 (95% CI = 0.09–0.28)***
Type of relationships										
Intimate (1)/Acquaintance—Superficial (0) Relationships	72.7% (*n* = 16)	93.5% (*n* = 58)	25.9% (*n* = 7)	0.18 (95% CI = 0.05–0.73)*	7.62 (95% CI = 2.13–27.22)**	70.5% (*n* = 158)	93.5% (*n* = 58)	25.9% (*n* = 7)	0.17 (95% CI = 0.06–0.47)***	6.84 (95% CI = 2.76–16.95)***
Characteristics of relationships										
Duration of relationships: Short-Medium: up to 9 years (0)/Long: 10 years plus (1)	23.8% (*n* = 5)	47.6% (*n* = 30)	8.7% (*n* = 2)	0.34 (95% CI = 0.11–1.05)†	3.28 (95% CI = 0.56–19.15)	55.7% (*n* = 102)	47.6% (*n* = 30)	8.7% (*n* = 2)	1.39 (95% CI = 0.78–2.46)	13.22 (95% CI = 3.01–58.05)***
Victim/Perpetrator Cohabitation: yes (1)/no (0)	4.5% (*n* = 3)	88.9% (*n* = 56)	5.6% (*n* = 4)	0.01 (95% CI = 0.00–0.02)***	0.81 (95% CI = 0.17–3.76)	54.5% (*n* = 139)	88.9% (*n* = 56)	5.6% (*n* = 4)	0.15 (95% CI = 0.07–0.34)***	20.37 (95% CI = 7.21–57.52)***
Contentiousness: yes (1)/no (0)	15.6% (*n* = 10)	63.5% (*n* = 40)	2.8% (*n* = 2)	0.11 (95% CI = 0.05–0.25)***	6.48 (95% CI = 1.36–30.82)*	56.5% (*n* = 122)	63.5% (*n* = 40)	2.8% (*n* = 2)	0.75 (95% CI = 0.42–1.33)	45.43 (95% CI = 10.86–190.02)***
Morbid jealousy: yes (1)/no (0)	10.9% (*n* = 5)	31.7% (*n* = 20)	12.5% (*n* = 4)	0.26 (95% CI = 0.09–0.76)*	0.85 (95% CI = 3.46)	25.5% (*n* = 60)	31.7% (*n* = 20)	12.5% (*n* = 4)	0.74 (95% CI = 0.40–1.35)	2.40 (95% CI = 0.69–13.73)
Stalking: yes (1)/no (0)	4.4% (*n* = 2)	14.3% (*n* = 9)	1.4% (*n* = 1)	3.30 (95% CI = 0.29–37.52)	0.37 (95% CI = 0.30–0.47)	12.0% (*n* = 28)	14.3% (*n* = 9)	1.4% (*n* = 1)	0.82 (95% CI = 0.36–1.83)	0.11 (95%CI = 0.01–0.77)**
Children involved (1)/not involved (0) in violence	3.3% (*n* = 1)	65.1% (*n* = 28)	9.5% (*n* = 2)	0.02 (95% CI = 0.00–0.15)***	0.33 (95% CI = 0.03–3.87)	24.4% (*n* = 42)	65.1% (*n* = 28)	9.5% (*n* = 2)	0.17 (95% CI = 0.08–0.36)***	3.07 (95% CI = 0.42–1.33)
Motives for offending										

(Continued)

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TABLE 5 (Continued)

Variables	Sexual femicide (A) *n* = 88	Rape within IPV (B) *n* = 63	Rape 'only' (C) *n* = 72	Odds Ratios (95% CI) A/B	Odds Ratios (95% CI) A/C	Non-sexual femicide (A) *n* = 275	Rape within IPV (B) *n* = 63	Rape 'only' (C) *n* = 72	Odds Ratios (95% CI) A/B	Odds Ratios (95% CI) A/C
Predatory/Antisociality (1)/Oppressive—Multiproblematic Relationships (0)	84.1% (*n* = 74)	12.7% (*n* = 8)	88.9% (*n* = 64)	36.34 (95% CI = 14.25–92.67)***	0.66 (95% CI = 0.26–1.68)	34.0% (*n* = 90)	12.7% (*n* = 8)	88.9% (*n* = 64)	3.54 (95% CI = 1.61–7.74)**	0.06 (95% CI = 0.03–0.14)***
Context of violence occurrence										
Home (victim's or perpetrator's) (1)/Public Places (0)	31.0% (*n* = 27)	90.5% (*n* = 57)	43.1% (*n* = 31)	0.05 (95% CI = 0.02–0.12)***	0.60 (95% CI = 0.31–1.14)	77.1% (*n* = 209)	90.5% (*n* = 57)	43.1% (*n* = 31)	0.36 (95% CI = 0.15–0.86)*	4.46 (95% CI = 2.58–7.70)***
Aggravating factors										
Substance use by the perpetrator: yes (1)/no (0)	15.9% (*n* = 14)	54.0% (*n* = 34)	52.8% (*n* = 38)	0.16 (95% CI = 0.08–0.34)***	0.17 (95% CI = 0.08–0.35)***	12.4% (*n* = 34)	54.0% (*n* = 34)	52.8% (*n* = 38)	0.12 (95% CI = 0.07–0.22)***	0.13 (95% CI = 0.07–0.23)***
Weapons: improper (1)/proper (0)	66.7% (*n* = 58)	45.2% (*n* = 14)	30.4% (*n* = 7)	2.43 (95% CI = 1.05–5.60)†	4.57 (95% CI = 1.69–12.35)**	36.0% (*n* = 96)	45.2% (*n* = 14)	30.4% (*n* = 7)	0.68 (95% CI = 0.32–1.44)	1.28 (95% CI = 0.51–3.23)
Body Exploitation: yes (1)/no (0)	53.4% (*n* = 47)	6.3% (*n* = 4)	1.4% (*n* = 1)	16.91 (95% CI = 5.65–50.59)***	81.39 (95% CI = 10.82–612.12)***	12.4% (*n* = 34)	6.3% (*n* = 4)	1.4% (*n* = 1)	2.08 (95% CI = 0.71–6.09)	10.02 (95% CI = 1.35–74.47)**
Body Mutilation: yes (1)/no (0)	15.9% (*n* = 14)	6.3% (*n* = 4)	1.4% (*n* = 1)	2.79 (95% CI = 0.87–8.93)	13.43 (95% CI = 1.72–104.84)**	1.8% (*n* = 5)	6.3% (*n* = 4)	1.4% (*n* = 1)	0.27 (95% CI = 0.07–1.05)	1.32 (95% CI = 0.15–11.43)
Perpetrator's Reaction after Crime: passive (0)/active (1)	94.8% (*n* = 73)	96.8% (*n* = 61)	91.7% (*n* = 66)	0.60 (95% CI = 0.11–3.38)	1.66 (95% CI = 0.45–6.14)	44.6% (*n* = 111)	96.8% (*n* = 61)	91.7% (*n* = 66)	0.03 (95% CI = 0.01–0.11)***	0.07 (95% CI = 0.03–0.18)***

Rape in this study is distinguished in cases of rape 'only' and cases of rape within IPV. Percentages exclude missing values. Column percentage are shown. CI, confidence interval. †$p < 0.10$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

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Women who are victims of sexual femicide often experience a prolonged pattern of abuse and torture, are often left unclothed after being raped and mutilated. Whether or not they know their killer influences how and why they become the target of such extreme violence.

Sexual versus non-sexual femicides

Sexual femicide was seen in this study as an extreme form of control and domination in which sex was used to degrade the woman to the point of death. The manifestation of violence was characterized by a specific pattern. Victims of sexual femicide were indeed more likely to be unknown and to be killed in a remote public place, with an improper weapon. Results also show that victims who engaged in prostitution were at a higher risk than other women of being victim of sexual femicides. Prostitutes were more likely victims of a sexualized femicide.

As emerged in other international studies (Regoeczi and Miethe, 2003; Zara et al., 2021), knowing or not knowing the perpetrator could make a difference in the way the woman was killed. These findings are consistent with statements in the literature (Meloy, 2000) that sexual femicides tend to be characterized by further exploitation of the victim's body and mutilation: an ultimate expression of control, deviant sexuality, and anger toward women are seen as the main incentives for this form of lethal violence.

However, most women in this study were killed by a man they knew, albeit with different levels of involvement with him and duration of the relationship (see **Table 1** for a description of the variables involved). As shown in **Table 3**, the type of relationship between victim and perpetrator could impact on how violence was acted out and on its intensity. Known victims were more exposed to non-sexual femicide, which more likely took place at home, in the context of a domestic dispute, and in the presence of their children, as other studies suggest (see Matias et al., 2020). It was not unusual that in non-sexual femicide the perpetrator either confessed the killing or committed suicide soon after the femicide.

It is Geberth (2018) who suggested that a certain type of abusive personality, under certain situational settings, can escalate to the worst because "an enraged lover or spouse who is acting under extreme emotional circumstances is capable of anything" (p. 452 as cited in Stefańska et al., 2021, p. 16). In non-sexual femicides, the relationship between victim and perpetrator was more likely to be characterized by contentiousness, suggesting a prolonged involvement in an oppressive climate of emotional tension, where a destructive, strained and turbulent relationship between them was, often, the trigger to femicide. This is why this form of violence against women is considered preventable (Jung and Stewart, 2019): early intervention could prevent the lethal escalation of IPV to femicide.

Rape within IPV and rape 'only': A brief comparison with non-sexual and sexual femicides

In this research, rape emerged as part of a pattern of intimate partner violence (rape within IPV) or as a sexual crime (rape 'only'). Known victims were more likely victims of intimate partner violence within which sexual violence clustered together abuse, control, domination, humiliation, making it a 'composite' form of violence (**Table 5** summarizes these results).

Men strive for control, and rape, especially when occurred within IPV, can be one of the most disempowering experience for the woman. The more the woman is deprived of her choice and consent, the stronger the man's control becomes. Victims of rape within IPV seem to share more characteristics with the victims of non-sexual femicide: the nature and duration of the relationship between victim and perpetrator could explain most of the similarities between these apparently different forms of violence against women (see **Table 5** which summarizes these results).

As mentioned previously, and sustained by other studies, non-sexual femicide and rape within IPV are in line with the concept of proprietariness in which the woman is entitled to exist to the extent her partner allows her to do so (Gino et al., 2019; Spencer and Stith, 2020). This was evident in many cases of rape within IPV such as the one described below.

"A woman (38 years old) decided to leave her abusive and violent partner after countless episodes of physical, sexual, psychological, and economic violence in a relationship that lasted more than 10 years. For him, it was unacceptable that she tried to break up with him, and he demanded to get back the dentures he had paid for. The woman lost all her teeth in one of the abusive incidents she experienced in her relationship with him. She remained with him for many years after this incident."

Sexual femicides tend to be an extreme form of using the woman as a sexual commodity.

Results show that in this study sexual femicides took different forms of sexualized and grievance, depending on the prevalent role of mostly sex or anger in the escalation into femicide, and on the relationship between perpetrator and victim.

The *use, consume and dispose script* is mostly featured in these types of sexual femicide because "what rape is to others is normal to *prostitutes*" (Farley et al., 2005, p. 254, *italics* added, as cited in Zara et al., 2021, p. 20). The fact that a significant proportion of victims of sexual femicides in this study were prostitutes is supported in the literature (e.g., Salfati, 2000; Salfati et al., 2008).

Victims were more likely to be unknown, to be abused and killed for antisocial and sexually deviant motives, and in secluded places. However, while in the case of sexual femicide it

was more likely that improper weapons were used by the killer, in the cases of rape 'only' substance abuse by the perpetrator was a factor that enhanced the disinhibition by which the sexualized anger was manifested.

When looking at victims of rape, especially of rape 'only,' our findings suggest that they shared similar characteristics with victims of sexualized femicides who are more likely prostitutes. Similarities and differences are synthesized in **Tables 3**, **5**.

Grievance and sexualized femicides

As shown in **Table 4**, victims of grievance femicides were more likely to know their perpetrators, and less likely to be prostitutes. What seems to have prevailed for these types of sexual femicidal offenders were angry cognitive schemas that might have promoted the excessively aggressive response in what might have been initially a consensual sexual situation (Stefańska et al., 2015). In other words, as suggested in the literature (Beech et al., 2005), grievance femicides were driven by the preoccupation and anxiety of losing contact with the woman (e.g., fear of being deserted), high emotionality, and angry rumination.

On the other hand, sexualized femicides involved more frequently unknown victims, although perpetrators may have targeted specific victims (e.g., prostitutes). Sexualized femicides were likely to be driven by predatory schema in which the victim was dehumanized and her body made the target of further exploiting actions. This is in line with clinical studies that suggest that victims of sexualized femicides are used as a sexual commodity to satisfy sexual, sadistic, and pervert urges (Meloy, 1997a). Such exploiting behavior was found to be more representative of sexual femicides than both non-sexual femicides and sexual violence.

Not dead enough: Body exploitation and mutilation

The presence of body exploitation and body mutilation of victims was examined and then compared with both sexual and non-sexual femicide, and also compared with rape. In line with other studies (Beech et al., 2005; Stefańska et al., 2015), these findings showed that the sexual factor in sexual femicides depended on whether the victims knew the perpetrators or not, and on the victims themselves. For instance, those victims whose body was exploited after their killing were more likely to be prostitutes. Prostitutes are over-exposed to the risk of workplace violence by their clients and tend to be killed more heinously than women who are not prostitutes, regardless of the degree of knowledge of the perpetrator (Marco Francia, 2021; Zara et al., 2021).

Stalking

Even though not directly explored, stalking occurred in only about 10% of the sample. It is possible that many stalking behaviors went undetected or not reported by the victims (Miller, 2012). Results show that stalking was more likely in cases of rape within IPV, suggesting that obsessive pursuit of intimacy is reinforced by a partner who is perceived as attainable the more the perpetrator attempts to control and dominate her. These preliminary findings are in line with international literature (Douglas and Dutton, 2001; Fox et al., 2011) that indicate that stalking and IPV share many similar dimensions because both crimes are characterized by unwanted, harassing, intrusive and frightening and/or intimidating behaviors.

Stalking has rarely been examined in studies of sexual and non-sexual femicide, and the extent of the association is not well understood (Campbell et al., 2007; Stefańska et al., 2021). Further specific research on stalking behavior in cases of femicide and rape deserves attention, as early identification of conditions that promote and reinforce the pursuit of intimacy may help prevent femicide and prevent the continuation of violence.

Limitations of the study

These findings are not without limitations. All femicide data were retrospective, and it was not possible to gather first-hand information from family members about the quality of the relationship between victim and perpetrator, and from perpetrators about the motives behind the killing. The evidence gathered explains only part of the dynamics of the intimate partner violence that fostered the femicide. Furthermore, it was impossible, with these data, to reconstruct with preciseness the victimogenic factors that interacted with other factors to escalate into sexual and non-sexual femicides, and that distinguished them from those victimogenic factors involved in rape.

Information on the victims were gathered through clinical and forensic reports so it was not possible to examine directly and in detail the conditions in which the victims were in before the crime (e.g., anxiety and preoccupation over their lives). Specific information about victims could be helpful for organizing preventive interventions.

We were unable to explore further the sexual nature of femicides because the information gathered were exclusively based on the forensic pathology reports, while access to the family members of the victims or to the offenders was not possible. Needless to say that getting in contact with the family members of the victims or perpetrators was beyond the scope of this study. Research findings (Beech et al., 2005; Stefańska et al., 2015) showed that deviant sexual and sadistic fantasies are an important factor in the characterization of sexual femicides. However, because analyses were based on the information

presents in the files available, in this study it was not possible to assess the impact of deviant fantasies upon femicides.

Despite these limitations, this study contributes to understanding similarities and differences in these forms of violence against women. Non-sexual femicides and rape within IPV have in common aspects related to known victims with whom the perpetrators had an intimate relationship. The relationship between victim and perpetrator can make a difference in how, where and for how long the abuse is endorsed before transforming itself into the physical death of the woman.

Sexual femicides and rape 'only' are likely to involve unknown victims. Sex was the common denominator of these types of violence against women.

Conclusion

While the ultimate goal of science and governments is to prevent all forms of violence against women, their intermediate goal should be to prevent violence from worsening to the point of killing. The fact that nearly a quarter of perpetrators had prior criminal records is an indication that violence against women in all its forms is a crime characterized by significant persistence over time, and it is possible that some violent incidents went unreported, contributing to the dark number that features in these different forms of violence against women. Governments should always rely on evidence-based research in order to make it possible for every woman to *begin again* in life, and not in death.

Given that 'until death all is life,' to paraphrase Paley (1999), every woman deserves the open destiny of life and should be assured that human rights are fully respected and endorsed because violence against women is a crime that victimizes all people, not just women.

Data availability statement

The dataset involves sensitive data (e.g., criminal records, forensic files) and only in particular circumstances could be made it available under the authorization of authorities. Requests to access the datasets should be directed to GZ, georgia.zara@unito.it.

Ethics statement

The studies involving human participants were reviewed and approved by in order to meet all the ethical standards, the researchers followed all possible procedures to ensure confidentiality, fair treatment of data and information, and to guarantee, at each stage of the research, that the material was treated with respect and discretion. The research protocol was organized according to The Italian Data Protection Authority Act nr. 9/2016 (art. 1 and 2: application and scientific research purposes; art. 4: cases of impossibility to inform the participants, e.g., deceased people), to The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans (2013), and to the recent General Data Protection Regulation (GDPR) (2018). It was carried out in line with the Italian and the EU code of human research ethics and conduct in psychology, forensic pathology and legal medicine. Both research projects were approved by the Bioethics Committee of the University of Turin (respectively for the femicide study with protocol nr. 191414/2018; for the sex offending project with protocol nr. 6494/2018). The patients/participants provided their written informed consent to participate in this study.

Author contributions

GZ, SG, SV, and FF conceived, planned, and organized the study, drafted the article, and interpreted the results. GZ and SV attained and coded the data and critically revised the article. GZ designed the study and analyzed the data. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.957327/full#supplementary-material

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Shifting social norms to prevent age-disparate transactional sex in Tanzania: what we can learn from intervention development research

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This paper reflects on the development process (2015–2020) of the Learning Initiative for Norms, Exploitation, and Abuse (LINEA) Intervention. The LINEA Intervention is a multi-component social norms intervention to prevent age-disparate transactional sex in Tanzania. This paper aims to: (1) critically reflect on the LINEA Intervention development process by retrospectively comparing it with a pragmatic, phased framework for intervention development in public health, the Six Essential Steps for Quality Intervention Development (6SQuID); and (2) discuss the usefulness and applicability of this framework to guide intervention development for gender-based violence prevention. This paper contributes to a growing field of intervention development research to improve the designs of interventions to prevent gender-based violence. Findings showed that the LINEA Intervention development approach mostly aligned with the steps in 6SQuID framework. However, the LINEA Intervention development process placed particular emphasis on two phases of the 6SQuID framework. First, the LINEA Intervention development process included significant investment in formative research, feasibility testing, and refinement; and second, the LINEA Intervention was informed by a clearly articulated behavior change theory—social norms theory. Beyond the 6SQuID framework the LINEA Intervention development process: (i) followed a non-linear, iterative process; (ii) applied ongoing feasibility testing to refine the intervention, and (iii) relied on co-development with local implementers and participants. This paper suggests future components for a robust intervention development process, highlighting beneficial additions to the 6SQuID approach, a well-recognized intervention development sequence. Particularly useful additions include incorporating sufficient time, flexibility, and resources to foster meaningful collaborations and iteration on the intervention design.

KEYWORDS

social norms, age-disparate transactional sex, sexual exploitation, adolescence, reproductive and sexual health, intervention development, mass media interventions, curriculum-based intervention

1. Introduction

Evidence on interventions to prevent gender-based violence (GBV) in low-and middle-income countries has increased substantially over the past decade with growing consensus about what works in different settings (Heise, 2011; Jewkes et al., 2021). However, it is not uncommon for GBV interventions, and public health interventions more generally, to be implemented or adapted to new settings and subjected to evaluation before there is sufficient evidence that they are well-targeted, address modifiable determinants, and meet the needs of intervention participants. Furthermore, interventions have been critiqued for overlooking the influence of contextual factors and possible unintended consequences (Pawson and Tilley, 1997; Zimmerman et al., 2021). A growing number of intervention evaluations have exposed the need for stronger intervention development research to ensure interventions can be well-targeted, with optimal efficacy and potential for replication and scale-up (Onken et al., 2014; Zimmerman et al., 2016; Bleijenberg et al., 2018; Turner et al., 2019; Zimmerman et al., 2021). Hoddinott (2015) defines intervention development research as:

> *A study that describes the rationale, decision-making processes, methods, and findings which occur between the idea or inception of an intervention until it is ready for formal feasibility, pilot, or efficacy testing prior to a full trial or evaluation. (2015, p.1)*

In recent years, researchers have started to publish approaches to intervention development. In a systematic review O'Cathain et al. (2019) synthesized this literature to identify eight categories of approach to intervention development. Although many of the approaches they identified could be applied to the LINEA intervention we have chosen to reflect on a stepped or phased approach, as a systematic, practical, logical, and evidence-based guide to intervention development. Phased models for intervention development are thought to maximize effectiveness and reduce waste for intervention implementation and evaluation (Onken et al., 2014; Wight et al., 2016; Bleijenberg et al., 2018; O'Cathain et al., 2019; Skivington et al., 2021). Phased models also describe each stage's relative importance and clarify language to facilitate mutual understanding between researchers and implementers (Onken et al., 2014).

The framework described by Wight et al. (2016) Six Essential Steps for Quality Intervention Development (6SQuID) has been recognized as a pragmatic guide for the development of complex interventions in public health. The 6SQuID framework describes an intervention development process from the inception of the idea to preparation of the prototype for implementation and evaluation. The key components of the 6SQuID framework are summarized in Table 1.

In this paper, we use the 6SQuID framework to retrospectively reflect on the intervention development process (2015–2020) for the Learning Initiative on Norms, Exploitation and Abuse (LINEA) Intervention in North-western Tanzania. The LINEA Intervention aims to prevent age-disparate transactional sex (ADTS) using a social norms approach. The LINEA Intervention is one component of the broader LINEA initiative, which has an expressed aim of testing the application of social norms theory to prevent sexual exploitation of children and adolescents.

We are applying the 6SQuID framework retrospectively primarily because the framework had not been published at the inception of the LINEA initiative (2013–14). During the LINEA intervention development process the field of intervention development research has moved on significantly, and the value of reviewing the literature on approaches to intervention development has gained traction only recently. The LINEA Intervention development approach emerged organically drawing on learning from existing and successful interventions to prevent gender-based violence, including SASA, IMAGE and MAISHA (Pronyk et al., 2006; Abramsky et al., 2014; Harvey et al., 2021), our review of the literature on social norms change theory, and the existing evidence about the drivers of ADTS.

TABLE 1 Six Essential Steps for Quality Intervention Development (6SQuID) stages in intervention development, adapted from Wight et al. (2016).

6SQuID framework stages in intervention development	
1	**Define and understand the problem and its causes.** Identify ways to define and measure 'the problem', including establishing whether the focus is the health risk factor or health outcome. Assess the problem's causes and distribution within a community in consultation with key stakeholders.
2	**Identify how the intervention will interact with the system.** Establish causal or contextual factors at the individual, inter-personal institutional, and structural levels. Consider both immediate and underlying factors that shape a problem. Decide which factors are modifiable and are most likely to influence change. Identify which target population will respond best to the intervention.
3	**Decide on change mechanisms.** Decide on and clearly articulate change mechanisms for the modifiable factors chosen in Stage 2, by depicting the program theory in a theory of change. Program theories should be informed by formalized theories of behavior change with predictive and explanatory power.
4	**Clarify how to deliver change mechanisms.** Work out how to deliver the change mechanisms and develop an implementation plan with stakeholders. Clarify the conditions and resources necessary for successful implementation in conjunction with stakeholders. Anticipate and minimize any harmful unintended consequences.
5	**Test and refine the intervention on a small scale.** Establish acceptability for the intervention among the intervention participants, practitioners, and implementing organizations. Finalize the intervention components and duration. Conduct testing and adaptations incrementally.
6	**Collect evidence of effectiveness to justify implementation and evaluation.** Consider whether small-scale implementation of the intervention is working as intended and achieving some short-term outcomes. Monitor and respond to any negative potential unintended consequences, before implementing and evaluating on a larger scale.

1.1. Learning Initiative on Norms Exploitation and Abuse: background and rationale

The Learning Initiative on Norms, Exploitation, and Abuse (LINEA) Intervention drew on social norms theories to promote behavior change (Cislaghi and Heise, 2018; Glass et al., 2019; Clark et al., 2020). Social norms are defined as reciprocally held beliefs and expectations about what others do (*descriptive norms*) and what others should do (*injunctive norms*), (Cialdini and Trost, 1998; Mackie et al., 2015; Horne and Mollborn, 2020). Social norms are maintained through multiple mechanisms that reflect entrenched power hierarchies (e.g., patriarchal power inequalities), (Harper et al., 2020). Social norms operate within *reference groups*, defined as the group of people an individual thinks set and maintain the expectations related to a given social norm. Social norms are enforced within reference groups through the anticipation of *sanctions:* those who adhere to norms are rewarded, and those who do not are punished (Bicchieri, 2005; Horne and Mollborn, 2020). Intervening at the multiple levels where social norms operate (individual, social and institutional) offers promising opportunities for change (Cislaghi and Heise, 2018).

The LINEA Intervention was designed to explore the application of social norms theory to prevent the sexual exploitation of children and adolescents. Following a global systematic review of the social norms linked to the sexual exploitation of children and adolescents (Buller et al., 2020), the LINEA Intervention was designed to focus on one target behavior, age-disparate transactional sex (ADTS). Transactional sex is defined as non-commercial sexual relationships or sex acts outside of marriage based on the implicit understanding that material support or other benefits will be exchanged for sex (Stoebenau et al., 2016). We define ADTS as transactional sex occurring between adolescent girls under the age of 18 and adult men more than 10 years older. Negative consequences of ADTS for adolescent girls include: increased risk of HIV and sexually transmitted infections (STIs); unplanned pregnancy; abortion; child marriage; school dropout; social sanctions; intimate partner violence; and sexual coercion (Luke and Kurz, 2002; Tener, 2019; Muthoni et al., 2020; UNAIDS, 2020; Kyegombe et al., 2020a).

To date, there is limited evidence about what works to prevent ADTS in Sub-Saharan Africa (Kaufman et al., 2013; Pettifor et al., 2019; Muthoni et al., 2020). To our knowledge, there are no rigorously evaluated interventions that target ADTS prevention as the primary outcome, that use a social norms approach, or that work simultaneously with men and adolescent girls. The LINEA Intervention results contribute evidence to inform the future design of interventions to prevent ADTS (Turner et al., 2019).

1.2. The LINEA Intervention

The LINEA Intervention is comprised of two components (Table 2). The first component is a 39-episode radio drama called *Msichana Wa Kati* (The Girl in the Middle), designed to shift social norms in the community. The second component includes two curricula designed to target individuals and small groups. Curricula content addresses determinants of ADTS, such as knowledge, skills, motivations, and social norms. Sessions cover topics such as gender equality and power, adolescent health and development, healthy relationships, communication, gender-based violence, transactional sex, and fatherhood and caregiving. Radio drama characters and storylines are incorporated throughout the curricula as case studies and examples and are also illustrated in curricula materials (see Figure 1 for examples). One curriculum engages adolescent girls (aged 13–15) in schools. The second curriculum works with adult men who are at least 10 years older than the youngest girls participating in the girls' sessions (i.e., aged 23 and over). The male participants work in male-dominated activities and are the primary perpetrators and instigators of ADTS with girls. The curricula use interactive and participatory learning activities to build knowledge, skills, and support for new social norms. Examples include critical reflection discussions, role plays, skill practice, and small group work. The sessions in the curricula include take-home activities to facilitate the organized diffusion of learning and support for protective norms in the participants' reference groups.

The LINEA Intervention was developed iteratively over multiple stages of testing and creation of intervention components. The collaborative approach to intervention design meant that LINEA worked with two locally-based implementing partners: Amani girls home (AGH) and Media for Development International, Tanzania (MFDI). We also gained input from researchers from the National Institute for Medical Research in Tanzania, curriculum development experts, and the community intended to participate in the finalized intervention.

2. Linea Intervention development research: key aims and methods

Data were collected to inform LINEA Intervention development research during three phases: (1) qualitative formative research; (2) feasibility testing; and (3) an iterative radio drama development process. Intervention materials, such as the curricula, were developed in parallel with research activities as explained in the following section. Data collection methods, data analysis, and ethical issues are also summarized in LINEA Evidence Brief 3 (LINEA, 2022).

TABLE 2 Learning Initiative on Norms, Exploitation, and Abuse (LINEA) Intervention components.

	Component 1: community Level	Component 2: individual and small group level	
	Radio drama	Girls' curriculum	Men's curriculum
Target population	Whole community	Adolescent girls aged 13–15	Adult men 23 years old and over
Number of sessions/episodes	39-episodes	17-session curriculum	18-session curriculum
Length of sessions/episodes	20 min	90 min	120 min
Number of participants	Whole community	15–20	15–20
Duration	9 months	4 months	4 months

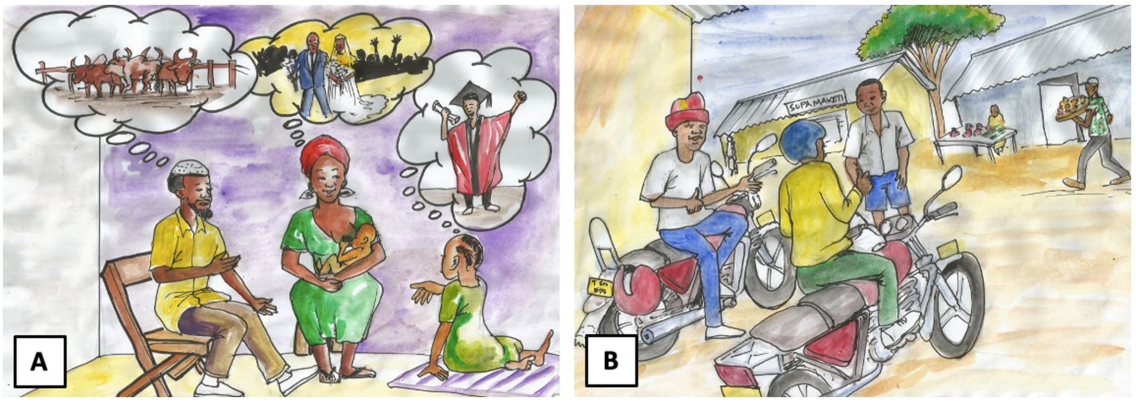

FIGURE 1
Storyboard images of learning initiative on norms, exploitation, and abuse (LINEA) radio drama characters: On the left, the main adolescent girl character, Amali, navigates the expectations of her family members **(A)**. On the right, the main adult man character, Tuma, must resist peer pressure to avoid age-disparate transactional sex (ADTS) **(B)**.

The purpose of the first phase, qualitative formative research, was to understand the nature of the problem of ADTS in three geographical settings. We collected data to explore beliefs about whether ADTS is exploitative and social norms upholding the practice. The research was conducted in partnership with local research institutions in Tanzania, Uganda, and Brazil from 2016 to 17, and the methods and findings from the research in all three contexts have been reported elsewhere (Wamoyi et al., 2018, 2019; Howard-Merrill et al., 2020; Ignacio et al., 2020; Kyegombe et al., 2020a,b,c; Wamoyi et al., 2021; Perrin et al., 2022). Following this qualitative formative research phase we chose to conduct the LINEA Intervention development process in Tanzania.

The second phase, intervention feasibility testing, occurred in June–July 2019 in partnership with Amani Girls Home and aimed to test the LINEA Intervention proof of concept and explore intervention delivery. We also collected evidence on indications of change and unintended outcomes (LINEA, 2022). A pre-and post-research design was carried out (without a control group) in a peri-urban community in the Mwanza region of Tanzania.

Feasibility data about the curriculum were collected using three methods: (1) structured observations of curriculum sessions with one group comprising 15 adolescent girls and another with seven adult couples with an adolescent daughter; (2) interviews before and after curriculum participation to assess indications of change with three adolescent girls, three men, and three women participants; and (3) feedback from implementing partner staff. Data collected during feasibility testing informed the production of the final LINEA Intervention curricula.

Feasibility data about the radio drama were collected from a series of radio drama listener groups with four different populations: 14 adolescent girls, 10 women and nine men with adolescent daughters, and seven community leaders (two women and five men). During listener group sessions participants shared feedback on radio drama storylines, characters, and casting. The radio drama was finalized during the third stage of LINEA Intervention research in partnership with the radio drama production company MFDI, and implementing partner organization, AGH.

The third phase of intervention development was an iterative radio drama development process conducted in 2019 in the Mwanza region. This research was designed to develop and finalize the radio drama storylines (case study below). Feedback was collected during four listener group sessions with approximately 15 participants each: adolescent girls aged 13–15, adult women, adult men, and community leaders.

The LINEA Intervention development process is complete and at the time of writing pilot testing of the intervention is underway, including studies to explore delivery approaches transferability to different locations in Tanzania.

3. Applying the 6SQuID framework

In this section, we reflect on how LINEA Intervention development process compared to the 6SQuID framework stages.

3.1. Stage 1: defining and understanding the problem

The Learning Initiative on Norms, Exploitation and Abuse Intervention development commenced with a qualitative formative study with men and women, and adolescent boys and girls in the Mwanza region in 2016–17. The study explored local perspectives of ADTS. The formative research found that adolescent girls believed adult men would provide more and better gifts than same-age partners (Wamoyi et al., 2018, 2021). Adult men claimed to find adolescent girls more sexually attractive than their wives (Howard-Merrill et al., 2020). We also found that participation in ADTS boosts the status of some men and adolescent girls, while for others it is a source of shame and regret (Wamoyi et al., 2018, 2019; Howard-Merrill et al., 2020). Using this information, we identified the social norms underpinning ADTS (described in Stage 2).

The LINEA Intervention formative research aligned closely with Stage 1 of the 6SQuID framework: understanding the nature of the problem. Our findings indicated that transactional sex was considered exploitative if the girl was forced to have sex or if she was perceived to be particularly vulnerable and unable to meet her material needs (Wamoyi et al., 2019). We found that men were perceived to take advantage of their position of relative power and affluence to engage in ADTS (Wamoyi et al., 2019; Howard-Merrill et al., 2020). Our findings confirmed the current literature that suggests that while girls often display some agency related to partner choice, once they enter a transactional sex relationship,

TABLE 3 Learning Initiative on Norms, Exploitation, and Abuse (LINEA) Intervention theory of change.

1. Reflect on values (and highlight how they align or differ from existing norms and behaviors)	Participants critically reflect on whether their values align with adherence to harmful social norms, to provide a motivation for participants to change.
2. Build knowledge and skills	Participants gain knowledge and guidance about recognizing, avoiding, and preventing ADTS. Participants practice what they have learnt outside of intervention activities, with support from their peers and intervention staff.
3. Synthesize values with new knowledge and skills	Participants align personal and group values with new knowledge and skills. Participants gain motivation to learn and act reinforcing phase 2.
4. Shift to protective social norms	Participants adopt aspirational new norms, which are protective against ADTS. Examples include the expectation that fathers should actively support their daughter to avoid ADTS, or the expectation that adults should support adolescent girls to say 'no' to ADTS.
5. Support each other in norm change	New reference groups adhering to protective norms are formed among intervention participants and their wider communities through diffusion. Intervention participants adopt bystander behaviors to question tolerance of harmful norms.
6. Make commitments and act	Intervention participants make commitments to each other and intervention staff to jointly adopt new norms and collectively resist backlash and sanctions for non-adherence to norms that drive ADTS. This stage reinforces phase 5.

their power is significantly reduced (Jewkes and Morrell, 2012; Groes-Green, 2013; Ranganathan et al., 2018).

By learning how the community perceived the problem of ADTS and how these attitudes related to the academic literature, we went beyond what is suggested in 6SQuID framework, notably gaining insights from the LINEA data on men's and boys' motivations for and perceptions of ADTS. Comparing men's motivations and perceptions with women's accounts facilitated the intervention's aim to target both adult men and adolescent girls.

3.2. Stage 2: identifying modifiable causal or contextual factors

Modifiable causal factors identified through the LINEA Intervention formative research were social norms linked to ADTS. We found that participation in ADTS in part represents men's and girls' adherence to social norms (Howard-Merrill et al., 2020). We identified four modifiable social norms that put girls at higher risk of ADTS: (1) girls are expected to obtain money, gifts, or other benefits from their sexual partner; (2) girls are expected to gain status through material items and other benefits accessed through ADTS; (3) girls who receive money, gifts, or other benefits from men are expected to reciprocate with sex; and (4) girls who have reached puberty are no longer children and therefore are perceived to be ready for sex (Wamoyi et al., 2019). We also identified two key social norms influencing ADTS among men: (1) men are expected to have heightened sexuality and sexual prowess; and (2) men are expected to provide economically in sexual relationships (Howard-Merrill et al., 2020).

When comparing this stage of the LINEA Intervention development process and 6SQuID, the 6SQuID framework suggests considering determinants of change at multiple levels (e.g., individual, inter-personal, and institutional-level changes). Likewise, the LINEA Intervention targets opportunities for change at multiple levels, including individual-level knowledge and skills required to act against ADTS and structural-level risk factors for ADTS. In alignment with the LINEA initiative's central aim, to test the application of social norms theory to prevent the sexual exploitation of children and adolescents, the LINEA Intervention's primary modifiable determinants are social norms.

3.3. Stage 3: defining mechanisms of change

During a 2017 inception meeting we collaboratively developed a theory of change (ToC) for the LINEA Intervention. The inception meeting included representatives from the UK and Tanzanian research institutions that carried out the formative research, the Tanzanian implementing partner organization AGH, the radio drama production organization MFDI, curriculum development experts, and funders.

The LINEA Intervention ToC was informed by the LINEA Intervention formative research, social norms theories, and the expertise of professionals working in the field of preventing violence against women and girls and prevention of sexual exploitation of children in Tanzania. The LINEA Intervention ToC included six phases, which are flexible, mutually reinforcing, non-linear, and can take place at any stage in the intervention (Table 3). The ToC also incorporates two central pathways to change. The first was to strengthen individuals' knowledge, attitudes, and skills to support adolescent girls' development, reflected in phases 1–3 of the LINEA Intervention ToC. The second directly operationalizes social norms theory to transform the social norms and unequal power dynamics that uphold ADTS. This is reflected in phases 4–6 of the ToC. The LINEA Intervention components and activities facilitate these two central pathways to create new social norms which are protective against ADTS. A structural component would constitute a third pathway to change: improving structural and material conditions to healthy developmental outcomes for adolescent girls. To account for this the intervention was designed to act alone or to accompany structural interventions as a 'plus' component.

3.4. Stage 4: clarifying delivery of change mechanisms

The LINEA Intervention change mechanisms and two-component intervention proof of concept comprised a compressed radio drama and a curriculum targeting adolescent girls and adult couples with an adolescent daughter. The curriculum was based on the theory of change (ToC) and drew on emerging evidence about the success of

TABLE 4 Comparison between the learning initiative on norms, exploitation, and abuse (LINEA) intervention proof of concept, and the finalized LINEA intervention.

	Modality of delivery		Intervention participants	
	Proof of concept	Finalized LINEA intervention	Proof of concept	Finalized LINEA intervention
Radio drama	15 Radio drama scenes	• 39 20-min radio drama episodes in three 13-episode seasons • Serialised on a local radio station, or audio files and listening devices distributed to listener discussion groups	Whole community	Whole community, listener discussion groups
Curriculum	12 Two-hour curriculum sessions	• 17 90–120-min sessions for adolescent girls (aged 13–15) • 18 120-min sessions for adult men	• Adolescent girls (aged 13–15) • Adult couples with an adolescent daughter	• Adolescent girls in school (aged 13–15) • Adult men (25 and over) working on male dominated activities

couples-based interventions to prevent gender-based violence (Abramsky et al., 2014; Stern et al., 2018; Clark et al., 2020).

In comparison with the LINEA Intervention development process the 6SQuID framework does not provide detailed guidance on establishing delivery of change mechanisms. For the LINEA Intervention the change mechanisms were determined through feasibility testing (restricted to the Stage 5 in the 6SQuID framework). Based on the feasibility study feedback from radio drama listener groups the radio drama proof of concept proved relevant and acceptable with no evidence of harmful unintended consequences. In contrast, we made significant changes to the curriculum component through consultation with curricula development experts. One unexpected change was the decision not to work with adult couples, as is common in interventions to prevent intimate partner violence. Instead, we developed two curricula to maximize relevance and appropriateness for the curriculum participants: groups of adolescent girls (13–15), and adult men. Based on observed linkages between the intervention components curricula case studies were synchronized with radio drama characters and storylines. Table 4 describes the refinements to maximize the acceptability and relevance following feasibility testing.

This LINEA Intervention development phase went well beyond what was proposed in the 6SQuID framework. Nonetheless, LINEA's process corresponds with Stage 4 of the 6SQuID framework in several ways. First, we clarified the conditions and resources for successful delivery of the two LINEA Intervention components through feasibility testing. Second, as proposed in the 6SQuID framework, feasibility testing also enabled us to identify and mitigate harmful unintended consequences. For example, during curriculum session observations, we noted that generic content on consent and coercion in ADTS risked reinforcing victim-blaming attitudes if not designed specifically for adolescent girls. Third, we worked with local implementers to deliver the intervention and incorporated their feedback into the feasibility study results.

3.5. Stage 5: testing and adapting the intervention

During multiple phases of feasibility testing and refinement, we explored the processes and indications of change from the LINEA Intervention. The 2018 proof of concept feasibility study had three central objectives: (1) assess the intervention's community acceptance, and contextual and cultural relevance; (2) understand any programmatic challenges and opportunities for the successful delivery of the intervention; and (3) identify indications of the intervention's impact, as a full experimental study was not possible at this stage. We carried out a separate, incremental process to finalize the radio drama, described in the case study below.

The evidence on feasibility testing aligns with the 6SQuID framework's recommendation to collect data to inform the intervention delivery, content, relevance, and acceptability. However, in the 6SQuID framework, feasibility testing is restricted to Stage 5, whereas for the LINEA Intervention it was ongoing and part of an incremental testing and revision process. While Wight et al. (2016) suggest that feasibility testing is commonly the most hurried stage of intervention development, substantial time and engagement was invested in the LINEA Intervention's testing and refinement. The LINEA Intervention also diverged from the 6SQuID guidance as we did not carry out an economic costing or evaluability assessment with an experimental design at this stage.

3.5.1. Case study: iterative radio drama development process

The 39-episode radio drama was developed iteratively in 2019 over three waves of feedback from listeners (Figure 2). In an initial workshop LINEA researchers, AGH, and MFDI developed the characters and a storyboard for all episodes from the formative findings. MFDI developed Act 1 (13 episodes), and AGH collected feedback in listener group sessions with 16 adolescent girls (aged 13–15), adult women, adult men, and community leaders, which was analyzed by the LINEA team. Team discussions then informed storyboards for the next act. This process was repeated until all 39 episodes of the radio drama were completed. MFDI developed a guide for broadcasters and a discussion guide to help with future delivery of the radio drama. LINEA, AGH, and MFDI jointly held a community engagement activity with research participants to conclude the process and foster a sense of ownership of the radio drama for the implementing partners and community members who participated.

3.6. Stage 6: collecting evidence of effectiveness

We assessed the feasibility and effectiveness (using indications of change) of the proof of concept for the radio drama and curriculum components separately. Participants found the radio drama proof of concept relevant and engaging, and the casting and ambient sounds realistic. The curriculum proof of concept for girls and adult couples was broadly acceptable and contextually and culturally relevant.

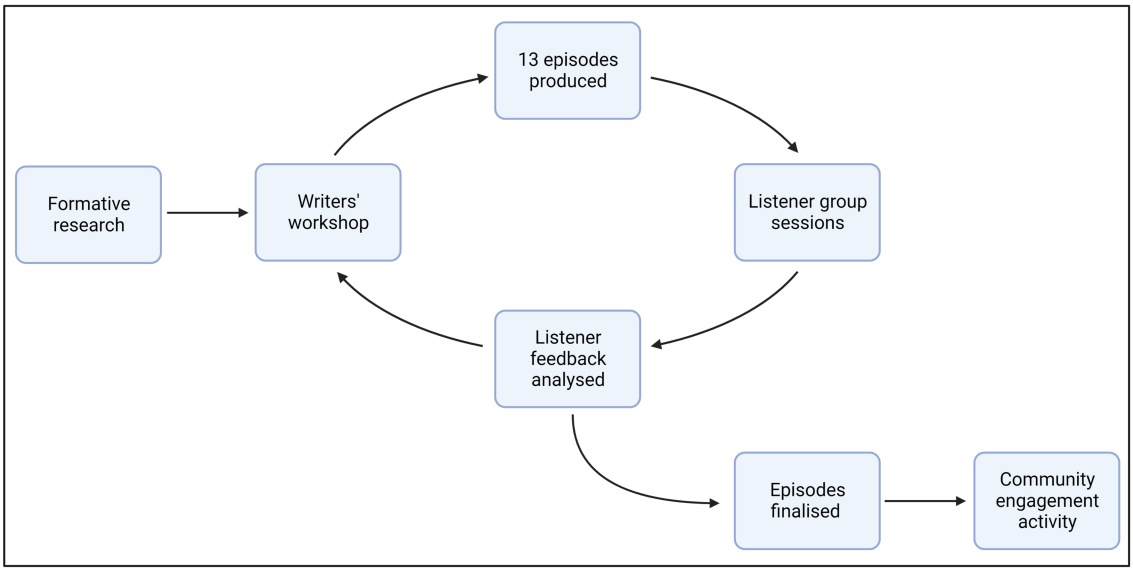

FIGURE 2
Iterative radio drama development process.

Attendance was high in all participant groups. Evidence suggested that participants started to reflect critically on their own experiences of ADTS. One adult male participant stated:

> *"There was a session where I felt like they were talking about me. The session about transactional sex. […] It made me feel like I should change." (Adult man curriculum participant, post-participation interview)*

As recommended in the 6SQuID framework, we tested for evidence of harmful unintended consequences and found none for either component. Further testing of the radio drama component occurred in two studies in the Kigoma and Shinyanga regions of Tanzania in 2021. Forthcoming results explore monitoring of potential harm, or backlash; dose–response testing of modalities of delivery (household-level radio drama discussion groups versus community-level broadcasts of the radio drama); and transferability to different geographical contexts and populations (households including one or more person with a disability). All findings from the LINEA Intervention process suggest that the intervention is ready to be implemented at a larger scale. If the results of the upcoming pilot randomized controlled trial shows promise, findings will inform a larger scale trial of scaled-up or adapted versions implemented in other areas of Tanzania.

4. Discussion

In this paper, we reflected on the LINEA Intervention development process by retrospectively mapping it to the 6SQuID framework. We chose the 6SQuID framework because it provides pragmatic guidance for a phased approach to intervention development. Our comparison found three important differences between LINEA and the 6SQuID framework: (1) non-linearity of intervention development; (2) multiple stages of feasibility testing and refinement; and (3) collaboration between research and locally based implementing partners throughout the intervention development process.

We found that the LINEA Intervention development process and the 6SQuiD framework aligned in many respects. Each of the six stages of the 6SQuID framework were present in the LINEA Intervention development process and broadly occurred in the same sequence. To design the LINEA Intervention we invested significant time and resources in formative research and iterative feasibility testing and refining, which align with 6SQuID Stages 1, 4, and 5. The contextual factors and change mechanisms identified in the LINEA Intervention development process reflected an expressed aim of testing social norms change theories, and so had a narrower focus than suggested in Stages 2 and 3 of the 6SQuID framework. Finally, our collaborative approach to intervention development meant we assessed the appropriateness of further pilot testing (6SQuID Stage 6) by considering indications of change and monitoring unintended consequences gathered through routinely collected data from intervention participants and partner staff delivering intervention components.

The LINEA Intervention development process invested significant time and resources in phases that Wight et al. (2016) describe as important but often overlooked: formative research, feasibility testing and refining. The LINEA Intervention incorporated elements of a clearly articulated behavior change theory, social norms theory, in multiple stages of the development process, which Wight et al. (2016) state is rare.

Importantly, our experience showed that the six stages of the process overlap and the LINEA Intervention returned to certain stages multiple times, whereas the linear stages of the 6SQuID framework have clear cut-offs between them (Wight et al., 2016). Our findings align with recommendations from the broader literature, which suggest that intervention development should be a dynamic, iterative process that is open to change, and forward-looking to future evaluations (Hoddinott, 2015; Bleijenberg et al., 2018; O'Cathain et al.,

2019; Turner et al., 2019; Zimmerman et al., 2021). The LINEA Intervention radio drama development case study showed how certain intervention elements may benefit from intensive, cyclical, and iterative development. Examples from the LINEA Intervention development provide insight into how to incorporate a non-linear and iterative approach in the latter stages of the 6SQuID framework (see case study and Figure 2).

Feasibility testing was a central feature that occurred throughout the LINEA Intervention development process, which was intended to determine relevance and acceptability, minimize unintended consequences, and ultimately improve efficacy. In comparison, feasibility testing only occurs in Stage 4 of the 6SQuID framework. The 6SQuID framework also provides relatively little information about best practice for feasibility testing. This reflects a broader lack of guidance and published qualitative feasibility test data in public health intervention research.

The final difference relates to research collaborations. LINEA Intervention development has benefitted from long-standing collaborations between academic researchers in Tanzania and the UK, curriculum development and mass media experts, and implementing organizations with expertise in preventing violence against women and girls, and sexual exploitation. Many activities and processes central to this collaboration were missing from the 6SQuID framework (for example, LINEA's extensive partner mapping and identification process).

Drawing on this learning we can suggest a modification to the 6SQuID framework (Figure 3). The six stages have remained the same but are no longer presented linearly. The modified framework suggests increased exchange and interaction between Stages 1 and 2, which concern problem identification. Stages 3, 4 and 5 are presented cyclically representing the need to iteratively test and refine the change mechanisms throughout the intervention development process. The modified framework also acknowledges that in the refining the change mechanisms and their delivery, intervention developers can also further define and understand the problem and its interaction with the system.

We propose that Stage 6—collecting evidence of effectiveness—can occur throughout the testing and refinement of the intervention change mechanisms. Collecting evidence in an on-going way allows a more flexible approach to assessing impact, creating opportunities to respond to adverse outcomes, and recognize possible positive unexpected outcomes. For example, further testing of the LINEA intervention in 2021 in preparation for a full pilot evaluation has found unexpected positive changes in caregivers' feelings of responsibility to discuss ADTS with their daughters to prevent them from harm (Pichon et al., 2022). This change occurred despite the decision not to target adult couples who were caregivers of adolescent girls in the intervention design, as part of Stage 4 when we were clarifying the delivery of change mechanisms.

We have added an additional Stage called 'Create and foster equitable research collaborations' (shown in green in Figure 3), which cuts across all activities and should begin before Stage 1 starts. This Stage includes specific activities such as partner mapping and identification, but also influences how activities are conducted in the other six steps such as engaging implementing partners in testing and refining the intervention on a small scale.

There are some limitations to the intervention development research presented in this paper. Retrospectively applying the framework prevented the authors from rigorously and purposefully testing the framework. Instead, we compared it to a process that occurred organically, informed by emerging learning about intervention development from the wider field. The LINEA Intervention was developed over several years with significant financial investment. It provides useful evidence for best practice given the current funding environment, which focuses on achieving

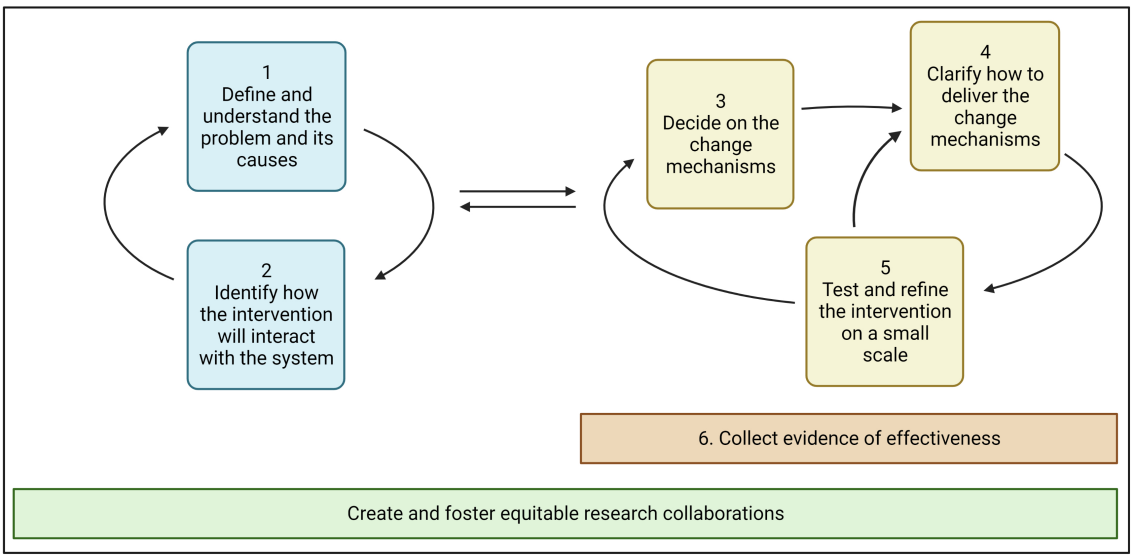

FIGURE 3
A dynamic and non-linear modification to the six essential steps for quality intervention development (6SQuiD) Framework.

outcomes rather than taking a longer-term view by investing in intervention development to optimize potential for success and minimize spending on ineffective interventions. This paper informs how we measure success for intervention development and will contribute towards more investment and thoughtful consideration of intervention development research.

4.1. Implications for research and practice

Despite these limitations our results offer lessons for future research and practice. Our research highlights the enormous benefits of formative research, feasibility testing, and refinement interventions, which are commonly given short shrift in intervention development and funding. The exercise of retrospectively applying the 6SQuID framework has underlined the need for intervention developers to review the literature on approaches to intervention development during the project inception phase. Intervention developers can turn to alternative research to guide feasibility testing (Eldridge et al., 2016; Ogilvie et al., 2020), which might help answer questions, such as how to establish if an intervention is 'feasible enough' and ready for piloting, given that intervention feasibility studies typically include small sample sizes and do not use experimental evaluation designs such as randomized controlled trials (RCTs).

A central lesson from our experience was the fundamental importance of collaboration with locally based implementing partners. There is a growing body of literature on the benefits of co-production and collaboration in research approaches (Voorberg et al., 2015; Hawkins et al., 2017; O'Cathain et al., 2019; Oliver et al., 2019; Williams et al., 2020). Collaborative research can create a mutually beneficial exchange for all parties and recognizes the need to address challenges that arise in such relationships by incorporating flexibility, investment of time and resources, and open communication (Zimmerman et al., 2016; Oliver et al., 2019). Collaborative approaches to intervention development require significant investments of time and resources, and sensitive management of the priorities and relative decision-making power of different actors (Oliver et al., 2019), in this case, academic and NGO partners, plus other stakeholders including funders.

5. Conclusion

This paper contributes evidence to encourage the importance of intervention development methods and adopting a flexible and iterative approach. In our theory-driven intervention, this meant developing a locally relevant theory of change and change mechanisms to address patriarchal inequalities. Ultimately, we find that the 6SQuID framework offers useful guidance for developing a locally informed intervention. However, we suggest that future intervention development research should incorporate greater use of co-production and iterative phases of design and adaptation to take account of the non-linear nature of behavior change. Our research provides an important alternative vision from short-sighted funding to longer-term investments in the development phase of an intervention, to optimize the potential to create efficient and effective interventions to prevent gender-based violence.

Data availability statement

The datasets presented in this article are not readily available because the data are qualitative and not possible to anonymise. Requests to access the datasets should be directed to AMB, ana.buller@lshtm.ac.uk.

Ethics statement

The studies involving human participants were reviewed and approved by London School of Hygiene and Tropical Medicine, and the National Institute of Medical Research, Tanzania. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

Author contributions

LH-M drafted the manuscript, conducted data analysis, and contributed to data collection and intervention development. AMB conceived of the study, drafted the proposal, obtained funding, and provided oversight for all elements of data collection, analysis, intervention development and manuscript production. CZ contributed to conceptualization and production of the manuscript. RS, JR, PP, LR, and RY contributed to intervention development. RS also oversaw elements of data collection. JW oversaw study design, data collection, and analysis for the LINEA Intervention formative research. All authors contributed to the article and approved the submitted version.

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Conflict of interest

Author LR was employed by Lori Rolleri Consulting Inc.

The remaining authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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A global study into Indian women's experiences of domestic violence and control: the role of patriarchal beliefs

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Domestic violence (DV) is a serious and preventable human rights issue that disproportionately affects certain groups of people, including Indian women. Feminist theory suggests that patriarchal ideologies produce an entitlement in male perpetrators of DV; however, this has not been examined in the context of women from the Indian subcontinent. This study examined Indian women's experiences of abuse (physical, sexual, and psychological) and controlling behavior across 31 countries by examining the relationship between the patriarchal beliefs held by the women's partners and the women's experience of DV. This study uses an intersectional feminist framework to examine the variables. Data from an online questionnaire was collected from 825 Indian women aged between 18 and 77 years ($M = 35.64$, $SD = 8.71$) living in 31 countries across Asia (37.1%), Europe (18.3%), Oceania (23.8%), the Americas (16.1%) and Africa (3.2%) and analyzed using a hierarchical linear regression. A majority of participants (72.5%) had experienced at least one form of abuse during their relationship, and over a third (35.1%) had experienced controlling behavior. In support of the central hypotheses, after controlling for potential confounders, women whose partners showed greater endorsement of patriarchal beliefs were less likely to have access to freedom during their relationship ($ß = -0.38$, $p < 0.001$) and were more likely to have been abused by their partner or a member of his family ($ß = 0.34$, $p < 0.001$). The findings of this study highlight the need to engage with men in Indian communities through culturally-tailored intervention strategies designed to challenge the patriarchal ideologies that propagate, justify, and excuse DV.

KEYWORDS

domestic violence, patriarchal beliefs, control, feminist framework, Indian communities

Introduction

Domestic violence (DV) is the most common form of violence against women, and occurs in every country around the world, transgressing social, economic, religious, and cultural divides (García-Moreno et al., 2005; Violence Against Women Prevalence Estimates, 2018). Although men can be abused by female partners and violence also occurs in non-heterosexual relationships, the vast majority of DV victims are women, and their perpetrators are a current or former male partner (World Health Organization, 2019). In the context of this study, DV includes physical, sexual abuse, or emotional abuse and controlling behaviors such as enforced isolation, excessive jealousy, and limiting access to economic resources or support (Our Watch,

2015; World Health Organization, 2019). In research, the terms, domestic violence, intimate partner violence, family violence, sexual violence and spousal abuse are used interchangeably. For the purposes of the present study, 'domestic violence' is used to refer to the violence women experience from their current or former intimate partner.

In addition to representing the leading cause of death for women around the world, with more than 50,000 women being killed by a partner or family member each year (UNODC, 2018), the physical, psychological, and social effects of DV are profound and enduring. Along with physical injuries, women who have been subjected to DV report higher rates of depression, anxiety disorders, post-traumatic stress disorder, cognitive impairment, substance abuse, and are more likely to have thought about or attempted suicide (Ellsberg et al., 2008; Chandra et al., 2009). They are also at a heightened risk of experiencing sexually-transmitted infections, gynecological problems, unwanted pregnancies, and miscarriages (Ellsberg et al., 2008; Stephenson et al., 2008; Dalal and Lindqvist, 2010). Moreover, violence in the home places women at significant risk of homelessness, unemployment, and poverty (Specialist homelessness services annual report, Summary, 2021). Although some men also experience violence from their female partners, prevalence rates from across the world show that women experience violence at three times a greater rate than men; the risk factors for men and women could also vary and therefore, these need to be clearly delineated for each group. Given the deleterious outcomes associated with DV, understanding the factors that drive it is vital in research, policy, as well as in clinical practice (Ellsberg et al., 2008).

A landmark study by the WHO which collected data from over 24,000 women in 10 countries about the extent of domestic violence they experienced found that depending on country and context (e.g., rural versus urban locations), between 15 and 71% of women had been physically or sexually assaulted by an intimate partner during their lifetime (García-Moreno et al., 2005). These findings raise three pertinent points: first, that the apparent universality of DV confirms that its occurrence is not a random aberration, but instead a reflection of gender inequalities that are deeply entrenched and systemically enacted in many cultures and societies around the world. Second, that in addition to gender, factors such as socioeconomic status, ethnicity, and immigration status intersect with gender to shape women's experiences of abuse. Third, that high rates of violence against women are not inevitable, nor intractable, and therefore should be the aim of global prevention efforts. In sum, it is clear that the harmful effects of DV are universal, but not experienced by all women equally. As such, identifying how diverse groups of women experience DV in their particular cultural context is essential for designing culturally relevant interventions for both victims and perpetrators (Bhuyan and Senturia, 2005). Studies have shown that the experiences of migrant and refugee women can vary significantly to their non-migrant counterparts, therefore, we need a clearer understanding of the nuances of these differences and the impacts of their experiences.

Indian women are one group of women that remain at high risk of DV with or without migration from India (Natarajan, 2002; Ahmed-Ghosh, 2004; Bhuyan and Senturia, 2005) compared to women from Europe, the Western Pacific or North America (Violence Against Women Prevalence Estimates, 2018). However, the largely Western-centric feminist discourse surrounding DV means there is a dearth of Indian-specific research. In addition, common methodological limitations such as the lack of psychometrically-validated, culturally-appropriate DV measurement tools, small and single-location sample sizes, and a failure to recognize forms of abuse other than physical abuse means that the voices of Indian women remain both under-and mis-represented in the extant literature (Yoshihama, 2001; Kalokhe et al., 2016).

While much progress has been made toward gender equality in India (Bhatia, 2012), the prevalence of DV is high. Data from the 2015–2016 Indian National Family Health Survey indicated that 33% of the 67,000 women surveyed in India had experienced DV during their marriage, with the most common type being physical violence (30%), followed by emotional (14%) and sexual violence (7%) (National Family Health Survey, 2017). A recent systematic review of 137 quantitative studies examining DV in India by Kalokhe and colleagues (Kalokhe et al., 2016) also found high rates of these types of violence along with a 41% prevalence of multiple types of abuse. The impact of physical, sexual, and psychological abuse on women's mental, physical, sexual, and reproductive health is severe and leads to greater levels of depression, suicide attempts, post-traumatic stress disorder, and somatic symptoms and a decreased quality of life (Kalokhe et al., 2016). Research also shows that Indian women who have migrated from India to the United Kingdom, the United States, and Canada experience higher rates of DV than the general population (Raj and Silverman, 2002; Ahmad et al., 2004; Mahapatra, 2012). Little is known about the DV rates among Indian women who migrate to other countries. Taken together, these findings suggest that Indian women across the globe experience high rates of DV. As such, it is important to understand the sociocultural factors that contribute to its occurrence.

While there is no single cause of DV, feminist theories emphasize how the circulation and espousal of patriarchal ideologies in society contribute to, create, and maintain DV (Pagelow, 1981; Smith, 1990). Although variously defined, patriarchy refers to the hierarchical system of social power arrangements that affords men more power and privilege than women, both structurally and ideologically (Smith, 1990; Hunnicutt, 2009) with the origins of the word 'patriarchy' coming from the Greek word *Πατριάρχης* (*patriakhēs*), meaning male chief or head of a family.

According to an ecological framework (Heise, 1998), patriarchal control, exploitation and oppression of women occurs within all levels of social ecology, including the macrosystem (e.g., government, laws, culture), mesosystem (e.g., the media, workplaces), microsystem (e.g., families and relationships), and at the level of the individual. Through social learning, patriarchal structures are internalized as patriarchal ideologies, which are a set of beliefs that legitimize and justify the expression of male power and authority over women, including DV (Smith, 1990; Yoon et al., 2015). More specifically, patriarchal beliefs include notions about the inherent inferiority of women and girls, men's right to control decision-making in both public and private spheres, traditional and proscriptive gender roles, and the condoning of violence against women (Our Watch, 2015; Yoon et al., 2015). Such ideologies preserve and strengthen the structural gender inequalities that set the necessary social context for DV to occur, by giving men the cultural, legal, and social mandate to use varying degrees of violence and control against women (Our Watch, 2015; Yoon et al., 2015; World Health Organization, 2019).

Research from the United States indicates that positive attitudes toward violence against women and beliefs in traditional gender roles is associated with perpetration of DV (Sugarman and Frankel, 1996; Stith et al., 2004). Similarly, Hah-Yahia (Haj-Yahia, 2005) found that

Jordanian men who subscribed to patriarchal ideologies were more likely to justify DV, blame women for violence against them, believe that women benefit from beating, and believe that men should not be punished for hurting their wives. Furthermore, a study of South Asian women living in the United States found that women who endorsed patriarchal beliefs were more likely to have experienced DV (Adam and Schewe, 2007), and men in Pakistan who adhered to patriarchal ideology were more likely to use physical violence against their partners (Adam and Schewe, 2007).

Despite its clear theoretical underpinnings, the relationship between patriarchal beliefs as a single construct and DV perpetration in Indian communities has, to the best of the authors' knowledge, not been quantitatively examined. This is important, as although patriarchy is omnipresent in all societies on earth, culture shapes its manifestation through values, norms, beliefs, traditions, and familial roles that perpetuate patriarchal structures and ideologies (Duncan, 2002).

In Indian families, power and authority is transmitted from father to the eldest son, meaning that females are expected to be subservient to males throughout their lifetimes; in childhood, to their fathers; upon marriage, to their husbands; and in old age (on occasion of the death of their husband), to their sons (Bhuyan and Senturia, 2005). The impact of a father's violence on children's development can last a long time. Research suggests that the effects of this violence against girls in childhood are much more serious and deleterious than the effects of violence used by other men, or even a mother, against women such that women who suffer violence by their father have low levels of resilience in adulthood – even though they might report other perpetrators (such as the husband) as committing greater violence (Tsirigotis and Łuczak, 2018). Therefore, women, as adults, can continue to be affected by patriarchal behaviors of men. In the Indian context, historically too, the hierarchy between men and women prevailed. For example, in ancient India, Smriti, Kautilya, and Manu philosophers demanded total subservience of women to their husbands (Kumar, 2017). In spite of advances in society about gender equality and gender roles, such attitudes still exist in India. For instance, the Indian National Family Health Survey found that less than two-thirds, that is, 63% of married women participated in decision-making about major household matters, and less than 41% were allowed to go to places such as the market, a health facility, or visit relatives alone (National Family Health Survey, 2017).

Prescriptive gender roles contribute to the incidence of domestic violence by positioning women as subordinate, with men therefore tasked with 'protecting' women and ensuring they uphold the gendered expectations and moral standards imposed on them (Haj-Yahia, 2005; Satyen, 2021). Indeed, physical violence is viewed as a common and acceptable response to women's "disobedience," or failure to meet her husband's expectations (Jejeebhoy and Cook, 1997). For example, 42% of men and 52% of women believed that a husband is justified in beating his wife if she goes outside without telling him, neglects the house, argues with him, refuses to have sex, does not cook properly, is suspected of being unfaithful, or is disrespectful. This demonstrates that women have possibly internalized their "inferior" status in society and are more accepting of the inequality they face in the household. Honor killings, where women are killed by male family members for bringing shame to their families, still occurs in India and may represent the most extreme example of such attitudes (Kumar and Gupta, 2022).

Taken together, the aforementioned findings clearly outline the broad links between DV and elements of patriarchal ideology including ideas about the inherent inferiority of women, men's right to control decision-making, traditional gender roles, and condoning of violence against women (Our Watch, 2015; Yoon et al., 2015). However, lacking from this literature is a culturally-specific, comprehensive assessment of the role of individual-level patriarchal beliefs in influencing Indian women's experiences of DV. Understanding this relationship is vital in order to develop culturally tailored DV interventions and policies.

While cultural expressions of patriarchy provide the necessary context for DV to occur, according to intersectionality theory (Kumar and Gupta, 2022), gender oppression intersects with other forms of inequality, such as poverty, racism, and migration status to increase the risk of DV for certain groups of Indian women (Sokoloff and Dupont, 2005). For example, those who are younger, have more children, live in rural locations, have fewer years of schooling, or who are unemployed are more likely to experience DV during their lifetime (Sokoloff and Dupont, 2005), and may be less likely to seek help for DV (Leonardsson and San, 2017). Furthermore, migration has been identified as a key risk factor for DV (Satyen et al., 2018; UNODC, 2018; Satyen, 2021), through practical and cultural barriers to accessing help and support (Raj and Silverman, 2002; Colucci et al., 2013), as well as so-called 'backlash' factors, whereby men increase their use of violence and control following migration to more egalitarian locations, in response to the threatened loss of status and authority (Dasgupta and Warrier, 1996; Zavala and Spohn, 2010). In examining DV, it is therefore important to acknowledge the compounding effects of such factors, while underscoring the central role of patriarchy (Gundappa and Rathod, 2012).

The objective of this study was to examine Indian women's experiences of abuse (physical, sexual, and psychological) and controlling behavior across 31 countries by examining the relationship between the patriarchal beliefs held by the women's partners and the women's experience of DV. Given our understanding of how patriarchal beliefs relate to DV, it was hypothesized that a greater endorsement of patriarchal beliefs by a woman's partner would predict greater occurrence of abuse and controlling behavior during their relationship.

Method

Research design

We examined the relationship between women's partners' patriarchal beliefs (as reported by the women) and the women's experiences of DV using an intersectional feminist lens. This study used a quantitative, cross-sectional design using an online survey, which explored the impact of partners' patriarchal beliefs on Indian women's experiences of DV. The inclusion criteria for partaking in the study included: women who identified culturally as belonging to or having origins in the Indian sub-continent. They needed to have been in the past or currently be in an intimate partner relationship. They could be living in the Indian sub-continent or have migrated elsewhere in the world. They needed to also be 18 years and over to take part in the study and have minimal English language skills to comprehend the questionnaires.

Participants

Participants for this study were recruited from across the world via social media and culturally relevant organizations. Through targeted recruitment, Indian women 18 years or over who were currently in or had previously been in an intimate relationship with a male were asked to participate in the study. In addition to recruiting from India and Australia, data from the Government of India's Ministry of External Affairs (Population of Overseas Indians, 2018) was used to identify the 15 countries with the highest population of people of Indian origin and these were targeted for recruitment in addition to promoting the study across other countries. Target countries included: the United States, United Arab Emirates, Malaysia, Saudi Arabia, Myanmar, the United Kingdom, Sri Lanka, South Africa, Pakistan, Canada, Kuwait, Mauritius, Qatar, Oman and Singapore. In total, 349 organizations and community groups were contacted by email and provided details of the study. Further, A Facebook page was set up for the project, and a recruitment advertisement was posted to 1,167 public groups relating to Indian women's interests. In all, 825 participants aged between 18 and 77 years (M = 35.64, SD = 8.71) from 31 countries across Asia (37.1%), Europe (18.3%), Oceania (23.8%), the Americas (16.1%) and Africa (3.2%) took part. The majority of them were born in India (n = 720, 87.3%), but 59.3% had migrated from their country (India or other) of birth. See Table 1 for a detailed summary of their demographic characteristics.

TABLE 1 Demographic characteristics of the sample (N = 825).

Variable	Frequency (n)	Percentage (%)
Age (M = 35.65,	237	28.7
SD = 8.71)	405	49.1
18–30	132	16.0
31–40	38	4.6
41–50	13	1.6
51–60		
> 60		
Continent of origin	11	1.3
Oceania	747	90.5
Asia	20	2.4
Europe	10	1.2
Americas	37	4.5
Africa		
Continent of residence	196	23.8
Oceania	306	37.1
Asia	151	18.3
Europe	133	16.1
Americas	26	3.2
Africa		
Migration status	489	59.5
Migrant	334	40.5
Non-migrant		
Religion	5	0.6
Buddhist	57	6.9
Catholic	35	4.2
Other Christian	546	66.2
Hindu	63	7.6
Sikh	31	3.8
Muslim	21	2.5
Other	64	7.8
Atheism		
Marital status	649	78.7
Married	124	15.0
Divorced or separated	41	5.0
De facto	9	1.1
Widowed		
Living arrangements	43	5.2
Alone	480	58.2
With partner	485	58.8
With children	80	9.7
With natal family	104	12.6
With partner's family	40	4.8
Non-family members		
No. of children	232	28.1
(M = 1.06, SD = 0.89)	289	35.0
Zero	216	26.2
One	21	2.6
Two	6	0.7
Three		
Four or more		

(Continued)

Measures

Participants completed an online questionnaire that assessed demographic information, their experiences of domestic violence, and their partners' patriarchal beliefs.

Demographic information

Participants' age, country of birth, country of residence, migration status, religion, marital status, and educational attainment were collected.

Domestic violence

Experiences of abuse including physical, sexual, and psychological and controlling behaviors perpetrated by women's partners and/or his family members were measured using the 63-item Indian Family Violence and Control Scale [IFVCS; (National Family Health Survey, 2017)]. The IFVCS was designed for use in the Indian population, with items being derived from informant and expert interviews with an Indian sample to ensure it captured culturally-specific forms of DV (Kalokhe et al., 2015, 2016). Preliminary validation of the IFVCS suggested that the scale has strong internal consistency, and good concurrent and construct validity (Kalokhe et al., 2016). Cronbach's alphas were calculated for the current sample, indicating that both the control and abuse subscales had very good internal reliability (0.94 and 0.97 respectively).

The control subscale consisted of 14 items which asked women to rate their access to various freedoms during their entire relationship (e.g.,

TABLE 1 (Continued)

Variable	Frequency (*n*)	Percentage (%)
Highest level of	6	0.7
education	21	2.5
Primary	10	1.2
Secondary	239	29.0
Vocational	495	60.0
Undergraduate	51	6.2
Postgraduate		
Other		
Employment status	246	29.8
Unemployed	113	13.7
Part-time	397	48.1
Full-time	35	4.2
Casual	33	4.0
Volunteer		
Partner's employment	53	6.4
status	33	4.0
Unemployed	688	83.4
Part-time	22	2.7
Full-time		
Casual		
Compared to partner,	140	17.0
earns	128	15.5
More	516	62.5
About the same		
Less		

"freedom to spend my own money on personal things") on a 4-point scale, ranging from 0 (*never*), to 3 (*often*). Total scores for this subscale ranged from 0 to 42, with lower scores indicating lower access to freedom, or more frequent controlling behavior. The 49-item abuse subscale comprised of statements relevant to psychological (22 items), physical (16 items), and sexual violence (11 items) domains and asked women about the frequency of abusive behaviors (e.g., "burnt me or threatened to burn me with a cigarette") on a 4-point scale, from 0 (*never*) *to* 3 (*about once a month*). Higher scores indicated greater frequency of abuse, with the total possible abuse score ranging from 0 to147.

Partner's patriarchal beliefs

Women's partner's patriarchal beliefs were measured using 10 items derived from the 5-item Husband's Patriarchal Beliefs Scale, which was originally developed by Smith (1990) and later adapted by Ahmed-Ghosh (2004), with the addition of 5 items from the 37-item Patriarchal Beliefs Scale (Yoon et al., 2015). The 10 resultant items captured each of the core dimensions of patriarchal ideology identified by Yoon (Yoon et al., 2015); these include beliefs about the institutional power of men, the inherent inferiority of women, and gendered domestic roles. The scale asked women to rate *their perception* of their partner's level of agreement to various patriarchal beliefs (e.g., "men are inherently smarter than women") on a 7-point Likert scale ranging from 1 *(strongly disagree)* to 7 (*strongly agree*). Scores ranged from 10 to 70, with higher scores indicating greater endorsement of patriarchal ideology. Cronbach's alpha was calculated as.96, indicating this new scale had very high internal consistency.

Procedure

This study was guided by the WHO's ethical and safety recommendations for DV research (Ellsberg and Heise, 2002) and received approval from the institutional ethics committee in compliance with American Psychological Association (2017) ethical standards (American Psychological Association, 2017). All persons who saw an advertisement or accessed the online link received a plain language statement, as well as information about DV support services in their country, regardless of whether or not they completed the survey. To protect the safety of participants, a Quick Escape button was programmed into the survey. The survey (in English) was anonymous and took approximately 20 min to complete.

Results

Data screening and cleaning

Data cleaning was conducted prior to analysis. Cases missing more than 50% of their data were removed from the sample. For the remaining cases, random missing values were replaced with the series mean. All items across the three abuse subscales, and the control subscale of the IFVCS were summed to obtain a total abuse, and total control score, respectively. For the purposes of regression analyses, employment was dichotomised as employed versus not employed, and education as tertiary education versus non-tertiary education. Each nominal independent variable was treated as a set of dummy variables, with one variable serving as the reference group. For the regression analyses, only women who had reported some form of abuse were included in the analysis; thus, the 15.9% of the sample that reported no abuse were excluded from the analyses.

Analytical strategy

First, descriptive analyses were undertaken to determine the extent of DV and partners' patriarchal beliefs in the sample and these are presented in Table 2. As control and abuse were measured on different scales, two hierarchical multiple regression analyses (as seen in Table 3) were conducted to test the central hypothesis. For each regression analysis, a three-stage hierarchical regression, and bottom-up model building strategy was used. In model 1, a univariate model including patriarchal beliefs, and either abuse or control as the outcome measure was tested. This provided a baseline estimation of the variance in abuse or control predicted by patriarchal beliefs, enabling estimation of the contribution of the variables added hierarchically in subsequent models. In Model 2, demographic variables (age, marital status, educational attainment, employment status, migration status, and continent of residence) identified in the literature review as potential confounders were entered into the model; all demographic variables were entered into the model together. Two-way interaction effects between patriarchal beliefs and each of the demographic characteristics were examined to exclude potential moderation effects.

Descriptive analyses

Abuse and control

Results (seen in Table 2) demonstrated that 72.5% of women reported having experienced at least one instance of abuse in their lifetime, while 15.9% reported no abuse. Across the different subscales, 69.9% had experienced some form of psychological abuse, 45.2% had experienced physical abuse and 21.7% had experienced sexual abuse. Over a third of participants (35.1%) had on at least one occasion had an aspect of their freedom denied by their partner.

Patriarchal beliefs

The descriptive statistics for patriarchal beliefs are also presented in Table 2. The Mean scores ($M = 26.27$, $SD = 16.28$) indicated an overall tendency for partners to disagree with patriarchal beliefs.

Multiple regression analyses

A detailed summary of the hierarchical regression is presented in Table 3.

In Model 1, the univariate model, patriarchal beliefs was associated with a statistically significant 14.4% of the variance in controlling behavior. Women whose partners endorsed stronger patriarchal beliefs had less access to freedom in their relationship ($ß = -0.38$, $p < 0.001$). Introducing demographic variables in Model 2 using the Stepwise method was associated with a statistically significant additional 10.3% of variance in control. Specifically, women experienced significantly more control (<0.05) with increasing age and significantly less control (<0.01) when they were separated compared to women who were married. The beta value for patriarchal beliefs remained statistically significant and largely unchanged with the addition of the demographic variables ($ß = -0.35$, $p < 0.001$). Patriarchal beliefs alone accounted for 11.49% ($sr^2 = 0.12$) of the total variance in controlling behavior. In addition to patriarchal beliefs, two of the 11 demographic variables were significant predictors of control. Inspection of two-way interaction effects between PBS and each of the demographic characteristics indicated no evidence of moderation occurring. The final model accounted for 23.3% of the variance in control $F(12, 566) = 15.61$, $p < 0.001$, which is considered a large effect (Cohen, 1988).

A detailed summary of the hierarchical regression is presented in Table 4.

For Model 1, the univariate model, partners' patriarchal beliefs was associated with a statistically significant 11.4% of the variance in experience of abuse. Women who perceived their partners held stronger patriarchal beliefs were more likely to have been abused ($ß = 0.34$, $p < 0.001$). The addition of demographic variables was associated with a statistically significant additional 5.7% of the variability in abuse (Model 2). This final model explained 15.5% of the variance in abuse, adjusted $R^2 = 0.155$, $F(12, 564) = 9.79$, $p < 0.001$, which is considered a medium effect (Cohen, 1988). The beta value for patriarchal beliefs remained a significant independent predictor of abuse ($ß = 0.31$, $p < 0.001$). Patriarchal beliefs contributed the highest amount of variance in abuse, independently contributing 9% ($sr^2 = 0.09$). Inspection of two-way interaction effects between PBS and each of the demographic characteristics indicated no evidence of moderation.

TABLE 2 Descriptive statistics for abuse ($N = 729$), control ($N = 825$) and partners' patriarchal beliefs ($N = 729$).

Type of DV	*n* (%)	*M*	*SD*
Physical abuse		3.12	5.90
Never	356 (43.2%)		
Ever	374 (45.2%)		
Emotional abuse		9.72	11.40
Never	153 (18.5%)		
Ever	576 (69.9%)		
Sexual abuse		1.17	3.57
Never	550 (66.7%)		
Ever	179 (21.7%)		
Any abuse		13.86	18.14
Never	131 (15.9%)		
Ever	598 (72.5%)		
Any control[a]		32.56	9.12
Ever	290 (35.1%)		
Patriarchal beliefs		26.27	16.28

[a]Due to the scale used for the control subscale, the number of women who were never controlled could not be calculated. High scores on this subscale indicate greater access to freedom.

Discussion

This study is the first to examine the relationship between domestic violence and a partner's adherence to patriarchal ideology in the global Indian context. The findings support the hypothesis that women who perceived their partners to endorse greater patriarchal beliefs were more likely to have been abused and subjected to controlling behavior.

The finding that partners' patriarchal beliefs predicted DV victimization lends support to the longstanding feminist propositions that DV occurs mainly in contexts where patriarchal ideologies are dominant (Jejeebhoy and Cook, 1997; Haj-Yahia, 2005; Satyen, 2021). In this study, women who believed that their partners viewed women in general as inherently inferior to men, legitimized male authority in public and private arenas, endorsed prescriptive gender roles, and condoned the use of violence for gender-role violation were more likely to be abused or controlled by their male partners. This finding is consistent with the limited existing studies that have demonstrated the relationship between male patriarchal ideologies and DV perpetration across three countries including the United States (Sugarman and Frankel, 1996; Stith et al., 2004; Haj-Yahia, 2005; Adam and Schewe, 2007; Watto, 2009). By contributing to the understanding of the experiences of Indian women globally, this study highlights the pervasive and enduring negative influence of the patriarchal ideology on women.

The relationship between patriarchal beliefs and DV persisted after controlling for a range of factors such age, educational attainment, marital status, migration status, employment, and geographical location that have been previously used to explain DV victimization in Indian populations [e.g., (Sabri et al., 2014; Gender,

TABLE 3 Summary of hierarchical regression analysis for variables predicting control (N = 579).

	Model 1			Model 2		
Variable	*B*	95% CI	ß	*B*	95% CI	ß
Patriarchal beliefs	−0.22	[−0.26, 0.17]	−0.38***	−0.20	[−0.24, −0.16]	−0.35***
Age				0.09	[0.01, 0.18]	0.09*
Education						
Non-tertiary				Referent		
Tertiary				1.93	[−1.50, 4.34]	0.05
Employment status						
Unemployed				Referent		
Employed				1.36	[−0.11, 2.82]	0.07
Marital status						
Married				Referent		
Separated				−7.07	[−8.99, −5.18]	−0.28***
Widowed				−3.57	[−9.62, 2.91]	−0.04
De facto				1.39	[−1.97, 4.75]	0.03
Continent						
Asia				Referent		
Oceania				−1.81	[−4.10, 0.48]	−0.08
Europe				−1.34	[−3.57, 0.89]	−0.06
Americas				−0.21	[−2.58, 2.15]	−0.01
Africa				2.61	[−1.42, 6.63]	0.05
Migration status						
Never migrated				Referent		
Migrated				−0.69	[−2.61, 1.23]	−0.04
R^2		0.146		0.249		
Adjusted R^2		0.144		0.233		
$\triangle R^2$		0.146		0.103		
$\triangle F$		98.49***		7.04***		
df $\triangle F$		1, 577		11, 566		

***Denotes significance at the 0.01 level; *denotes significance at the 0.05 level.

2015; Kalokhe et al., 2018)]. It further emerged as the strongest independent predictor of women's experiences of both abuse and control. Such a finding cautions against any theory of DV in Indian communities that overlooks or minimizes gender as an explanatory factor. It also suggests that merely focusing on the individual characteristics of DV victims is problematic in that it conceals the ways in which DV is embedded in broader sociocultural structures including the violence committed in childhood by a father [e.g., (Tsirigotis and Łuczak, 2018)]. This finding removes some of responsibility and shame from both victims of DV and from individual cultural groups, by firmly situating their experiences within a patriarchal framework. This finding also has fundamental practical implications for understanding and preventing DV in Indian communities, by identifying patriarchal beliefs and practices as targets for intervention that are amenable to effecting social change in the continuance of DV.

An unexpected finding was that age, educational attainment, marital status, geographical location, migration status, and employment status did not moderate the relationship between patriarchal beliefs and DV experiences. These findings could be considered in light of the universal phenomenon of gendered violence in women and the significant role of patriarchal beliefs. This is in contrast to an intersectional framework (Crenshaw, 1991) which suggests that different social factors interact and intersect with gender oppression to place certain groups of women at increased risk of DV. While it is possible that this finding may be an artefact of the specific sample included in this study, we did not measure structural patriarchy, for example, casteism and classism, which may be a better proxy for the macro-level gender oppressions and inequalities referred to in intersectionality theory (Heise, 1998). In support of this explanation, one salient finding from the present study was that *continent of residence* was not an independent predictor of either abuse or controlling behavior and did not moderate the relationship between patriarchal beliefs and DV. This suggests that patriarchal beliefs can prevail despite structural gains in women's empowerment or through migrating to more egalitarian locations (Hunnicutt, 2009). However,

TABLE 4 Summary of hierarchical regression analysis for variables predicting abuse (N = 577).

	Model 1			Model 2		
Variable	*B*	95% CI	ß	*B*	95%CI	ß
Patriarchal beliefs	0.39	[0.30, 0.47]	0.34***	0.35	[0.26, 0.40]	0.31***
Age			0.02	−0.03	[−0.21, 0.15]	−0.01
Education						
Non-tertiary				Referent		
Tertiary			−0.04	−1.95	[−8.01, 4.10]	−0.03
Employment status						
Unemployed				Referent		
Employed			−0.04	−0.40	[−3.50, 2.70]	−0.01
Marital status						
Married				Referent		
Separated			0.25***	10.94	[6.91, 14.96]	0.21***
Widowed			−0.03	−5.11	[−18.38, 8.15]	−0.03
De facto			−0.06	−4.63	[−11.86, 2.60]	−0.05
Continent						
Asia				Referent		
Oceania			−0.04	−2.23	[−7.10, 2.63]	−0.05
Europe			−0.07	−2.23	[−6.96, 2.50]	−0.05
Americas			−0.09	−3.90	[−8.90, 1.12]	−0.08
Africa			−0.05	−5.64	[−14.18, 2.89]	−0.05
Migration status						
Migrated				Referent		
Never migrated			−0.10	−2.90	[−6.97, 1.18]	−0.08
Adjusted R^2		0.11		0.155		
F for change in R^2		75.02***		3.52***		

***Denotes significance at the 0.01 level.

the findings also demonstrated that women experienced greater controlling behavior as they became older and, in contrast to women who were married, those who were separated experienced less control. The latter findings could relate to lower levels of control because the women had separated from their partner. It is also possible that as women are older, they are more invested in their relationships and less likely to challenge greater levels of control by their partners. In sum, women's specific social context does not appear to specify the appropriate conditions for the translation of patriarchal ideas about gender relations and, in particular, DV (Yoon et al., 2015). The findings of this study highlight the need to engage with men at the individual level to challenge the patriarchal beliefs and norms that propagate, justify, and excuse DV.

Based on the findings of this study, it is clear that interventions should use a 'gender transformative' approach (Gupta and Sharma, 2003) which acknowledges that DV is inherently gendered and a product of patriarchal ideologies. These interventions could be provided in group or individual formats, should be culturally-tailored, and work with men to promote women's access to authority and decision-making, as well as challenge traditional gender roles and acceptance of DV (Violence against women in Australia An overview of research and approaches to primary prevention, 2017). Encouraging evidence from the international literature suggest that such programs can lead to short-term changes in both attitudes and behavior, including decreased self-reported use of physical, sexual, and psychological DV (Whitaker et al., 2006; Barker et al., 2010). However, the literature does not reveal if such programs have been piloted in Indian communities.

Limitations

The primary limitations of the current study relate to the sample characteristics and subsequent generalizability of findings. This study used a convenience sample and as such may not adequately represent Indian women across a range of societies. However, the strength is that women from 31 countries took part in the study. Second, the Partner's Patriarchal Beliefs scale asked women to rate *their* perception of their partner's beliefs, and therefore may not have accurately reflected men's ideologies. However, attempting to understand and validate women's lived experiences and perceptions is important in any feminist enquiry (Yllö and Bograd, 1984) and wives' accounts of their husband's behavior have been found to be more accurate than husband's

account of his own behavior (Arias and Beach, 1987). Nevertheless, future research may wish to further establish the validity and psychometric properties of the scale used. Finally, the cross-sectional nature of this study limits the extent to which we can draw conclusions regarding the temporality or causal nature of the observed associations. While theories of patriarchy suggest it fuels DV, it is also plausible that use of DV also strengthens patriarchal beliefs, by further reinforcing a system of male domination and female subordination in the family. Future studies employing a prospective or longitudinal design and representative sample will strengthen the practical significance of the findings described in this study.

Conclusions and implications for future research

Notwithstanding the aforementioned limitations, this study is novel in showing the effects of individual-level patriarchal beliefs on women's experiences of both abuse and control using a large, cross-national sample that adjusted for a range of established risk factors and employed a validated, culturally-sensitive measure of DV. The findings raise awareness of the extent of DV in Indian communities and emphasize the need to collectively acknowledge how gender and culture interact to shape women's experiences of DV. Such an understanding can have far-reaching implications for the reduction and prevention of DV in Indian communities, by providing mental health practitioners, community leaders, policy makers, women's activists, and the wider community more broadly, a principal target for intervention. Given the observed associations between partners' patriarchal beliefs and both abuse and controlling behavior, efforts should be targeted at developing culturally-tailored education strategies aimed at challenging men's enactment of their investment in patriarchy regardless of their social situation, includingtheir education level, religion, and caste.

While this study focused on patriarchal beliefs as an explanatory model for DV, future research may wish to incorporate other theoretical frameworks in order to develop a comprehensive, integrated, ecological theory of DV that considers other individual, interpersonal, and sociocultural factors alongside patriarchal ideology. Furthermore, whilst this study focused on men's beliefs, women's perceptual, cognitive, and behavioral responses to DV are also shaped by patriarchal beliefs (Ahmed-Ghosh, 2004). Therefore, future research should examine how patriarchal beliefs influence other DV processes such as reduced help-seeking behavior that place women at further risk of DV; the intersections between the prevalent Indian social contexts of gender, caste, and violence should also be examined – this will enable the more nuanced understanding of whether women from some castes, especially the lower castes are more prone to controlling and abusive behavior than women in the upper castes [see Deshpande (2003) and Khubchandani et al. (2018) for a broad review of the discrimination between people of different castes and the intersections of this with gender in the Indian society]. Finally, given that culturally-diverse groups of women remain underrepresented in the DV literature, future researchers should consider how patriarchal beliefs manifest in other communities to further enhance our understanding of DV and pave the way for the prevention of violence against all women.

Data availability statement

The datasets presented in this article are not readily available because the data is sensitive by nature and according to the Deakin University Human Research Ethics Committee protocol, we are not allowed to share this data, even in anonymized form. Requests to access the datasets should be directed to lata@deakin.edu.au.

Ethics statement

The studies involving humans were approved by the Deakin University Human Research Ethics Committee. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

LS: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Writing – original draft, Writing – review & editing. MB-I: Data curation, Formal analysis, Investigation, Methodology, Writing – original draft. BR: Data curation, Formal analysis, Validation, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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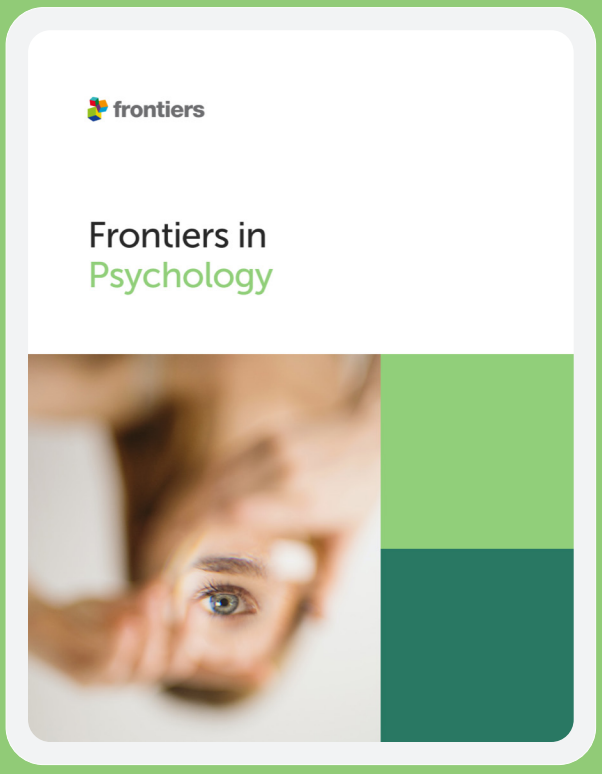

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