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A Taxonomy of Coping Strategies and Discriminatory Stressors in Digital Gaming

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Digital gaming's many benefits starkly contradict its well-cited toxicity. To accurately understand and compare how players cope with discriminatory stress in the context of play, 241 US players were surveyed on recurring sources of discrimination during gameplay and strategies for coping across ranging experiential prompts. Qualitative analysis created a taxonomy of discriminatory *targets*, discriminatory *acts*, and coping *strategies* specific to online digital play. We compare experiences, perceptions, and beliefs around coping across intersections of race, gender, and class (with notes on ability and age) and describe how player identities inform in-game behavior and exposure to types of discrimination and how coping strategies are navigated. We discuss the accumulative, anticipatory, and intergenerational nature of discriminatory stress in gaming, its stratified effects on well-being, and the role of discrimination in belief formation as well as ability to advocate for oneself and others.

Keywords: discrimination, stress, coping, ethnicity, gender, class, intersectional, digital game

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INTRODUCTION

> Before considering how to conceptualize, measure, and quantify health consequences of discrimination, one caveat immediately is in order: the purpose of studying health effects of discrimination is not to prove that oppression is "bad" because it harms health. Unjustly denying people fair treatment, abrogating human rights, and constraining possibilities for living fully expressed, dignified, and loving lives is, by definition, wrong—regardless of effects on health. (Krieger, 1999, p. 296)

In 2019, approximately two-thirds of the global online population play digital games on consoles, computers, and mobile devices (Wijman, 2018). As a form of play, gaming's unique appeal transcends many gendered, cultural, ethnic, national, ability, and socio-economic divides. This nearly universal endorsement is largely due to gaming's social (Koivisto and Hamari, 2014; Domahidi et al., 2018), cognitive (Baniqued et al., 2013; Oei and Patterson, 2013; Granic et al., 2014), and affective (Olson, 2010; Boyle et al., 2012; Dennis and O'Toole, 2014) benefits, combined with its ability to cater to diverse ways to play (Kafai et al., 2010; Gibbons, 2015). Digital gaming is often pursued as a leisure activity so that players can experience enjoyment, escapism, immersion, and challenge (e.g., De Grove et al., 2016; Abeele et al., 2020, but gaming's benefits exceed those of solely a pastime of pleasure. Playing games provides benefits to well-being by helping players recover from daily stressors (Reinecke, 2009), repair noxious moods (Bowman and Tamborini, 2015), build self-esteem (Bessière et al., 2007), promote mindfulness (Collins et al., 2019), combat loneliness (Depping et al., 2018), cope with life's challenges (Iacovides and Mekler, 2019), and practice emotional regulation (Villani et al., 2018).

Drawing an audience more diverse than other leisure activities (Media Entertainment, 2015), discrimination based on sexual orientation, gender, race, ethnicity, ability, and age is high in digital game contexts (Williams et al., 2009; De Schutter and Vanden Abeele, 2010; Kafai et al., 2010; Burgess et al., 2011; Shaw and Friesem, 2016; Behm-Morawitz, 2017; Edström, 2018; Shaw et al., 2019; Vella et al., 2020): 76% of women and non-binary digital game players experience sexism or genderism (McDaniel, 2016), rates of homophobia and transphobia vastly outweigh positive LGBTQ+ game content (Shaw et al., 2019), 92% of gamers feel that online platforms make others more critical and negative (Citrona, 2014), and systematic misrepresentation of race and ethnicity spans character design and game content, with players describing racism, tokenism, minstrelsy, and absence as norms in gaming (Shaw, 2012; Dietrich, 2013; Behm-Morawitz, 2017; Passmore et al., 2018). Game producers and players alike continue to struggle against norms that pander to gaming's stereotypical audience as young, able-bodied, Anglo-white, heterosexual men (Shaw, 2012). Over the last decade, player diversity has risen, yet studies show declining representation in industry and game content (IGDA, 2014; Passmore et al., 2017), with increasing reports of hate speech (Sengün et al., 2019). Thus, while most youth turn to online media and digital games as a means for coping with the challenges of life (Rideout et al., 2011), black, indigenous, people of color (BIPOC) spend 4.5 more hours per day consuming online media that leaves them more exposed to oppressive content than traditional "offline" sources (Tynes et al., 2014).

Exposure to recurring, systemic discriminatory stressors (e.g., ableism, sexism) requires strategies for long-term management. These strategies do not nullify the effects of discrimination, rather, as Krieger (1999), Luthar (2006), and Pascoe and Richman (2009) show, discrimination has extensive short- and long-term effects on *mental health* (e.g., lower self-esteem and life satisfaction; higher rates of depression, anxiety, and post-traumatic stress disorder), *physical health* (e.g., higher blood pressure, chronic pain), and *behavior* (e.g., higher aggression, self-harm; sleeplessness). These impacts starkly contrast gaming's recorded benefits.

Studies of discrimination commonly reference coping across a variety of digital contexts; however, few center coping in their study design. Of those that do, Gray's works (Gray, 2012a,b, 2018) and Ortiz (2019) provide unparalleled insight to how black players experience, manage, and resist heteropatriarchal White supremacist norms in gaming. Two studies focus on the coping strategies of (predominantly) White women (Fox and Tang, 2017; McLean and Griffiths, 2019), while Vella et al. (2020) show that women cope with targeted misogyny through manipulating their online appearance or "masking." The exceptional depth of these studies is owed to their restriction to specific intersections of player identities, affording for an ecologically valid account of plurality in experiences. However, such depth necessarily limits the breadth needed for comparisons *between* intersections of player identities. Best practices advise comparing such focused experiences across demographics, which requires a comprehensive taxonomy of context-specific strategies (Krieger, 1999; Skinner et al., 2003). Such a taxonomy has been absent from digital gaming literature.

The reasons for this gap are many. Stress management is often habitual (i.e., experientially suppressed) (Chen et al., 2016; Brosschot et al., 2017), making accurate elicitation of self-reported data notoriously difficult (Petitmengin, 2006). The wide range in how people describe both discrimination and coping as well as how we categorize that data underlies why studies identify 400+ coping strategies with no agreed-upon reduction (Skinner et al., 2003). Historically, studies of coping can lack ecological validity because they fail to account for systemic and historical relationships between stress, coping, and socially stratified identities or power dynamics (Krieger, 1999). This is to say nothing of the sample size and coding effort required for comparisons between demographic intersections of race, ethnicity, gender, class, ability, and so forth. Establishing a systemically accurate, context-specific, demographically comparative taxonomy of discriminatory sources and coping strategies is a formidable task.

Designing to account for these complexities, we conduct a qualitative study of coping with discrimination in digital games: its forms, frequencies, and effects. Thematic analysis constructs taxonomies for common *targets* of discriminatory stress, types of discriminatory *acts*, and coping *strategies* unique to digital gameplay across the compounding dynamics of race, gender, and class (with some notes on ability and age). We conclude by discussing the nature of discriminatory stress as an accumulative, persistent, anticipatory stressor biased toward feedback cycles of social inequity and describe their effects on behaviors, beliefs, and resilience in digital play.

Discrimination Across the Contexts Virtual and Analog

Discrimination is a threat against one's inherent legitimacy and agency along social categories of identity (e.g., axes of ethnicity, culture, gender, ability, age, nationality, *etc.*) (Crenshaw, 1991; Berjot and Gillet, 2011). A unique source of adverse stress, discrimination targets the most effective defense against its adverse effects: a positively affiliated sense of self (Luthar, 2006; Nadal et al., 2011; Bird, 2013; Romero et al., 2014; Umaña-Taylor et al., 2015). The social construction of axes of identity makes discrimination inseparable from historical norms, from social power dynamics. Anyone's identity or agency may come under threat; however, the mental, physical, emotional, and social effects of systemic threat are markedly different—significantly more harmful—for those culturally and/or historically marginalized (Krieger, 1999; Balsam et al., 2011; Chief Moon-Riley, 2017). Fundamentally accumulative, new discriminatory events combine with prior experiences common to marginalization such as intergenerational trauma, additional barriers to material conditions, and physical and psychosocial violence.

Direct sources of discrimination in online gaming run the gamut of discrimination's usual suspects. Cited forms include slurs, epithets, targeted threats, stereotypes, and targeted harassment or exclusion from other players, developers, and

games themselves (Gray, 2012b; Fox and Tang, 2017; McLean and Griffiths, 2019; Ortiz, 2019). *Indirect sources* stem from systemic, historical sources, evidenced in the under- and misrepresentation of BIPOC (Kafai et al., 2010; Dietrich, 2013; Passmore et al., 2018; Srauy, 2019), women and non-binary players (Williams et al., 2009; Shaw, 2015; Behm-Morawitz, 2017), LGBTQIA2+ players (Gray, 2018; Shaw et al., 2019), disabled players (Gibbons, 2015; Holloway et al., 2019), and older players (De Schutter and Vanden Abeele, 2010). Indirect forms of discrimination reported by players extend from storylines to colonial, heterosexist, and/or racist game worlds and character choices; oversights in playtesting; inequal access to the time or technology to game; and a range of biases in developer hiring practices, determining whose perspectives are included in games, and restricted affordances for player interactions (Mukherjee, 2018; Passmore et al., 2018; Holloway et al., 2019; Spiel et al., 2019; Srauy, 2019).

Daily discrimination is unavoidable for 69% of Americans (American Psychological Association, 2016). The ubiquitously pervasive nature of identity violence thus requires strategies for management rather than avoidance (Anisman and Merali, 1999; Moghaddam et al., 2002; Brondolo et al., 2009b). While some do not game due to harassment or material inequity (McDaniel, 2016; Rankin and Han, 2019), most adopt strategies to reduce its impact. Players hide their racial and gendered axes through avatar and username selection, masking their digital self-representations to avoid harassment (Gray, 2012a,b; Fox and Tang, 2017; Ortiz, 2019; Vella et al., 2020). Players withdraw from online socialization altogether, forgoing chat, microphone use, and tools for gaming's social benefits (McDaniel, 2016; Fox and Tang, 2017; McLean and Griffiths, 2019; Vella et al., 2020). Players with non-Euro-American accents and/or neuro-physical atypicalities employ similar strategies to control their self-disclosure (Passmore et al., 2018; Ortiz, 2019; Rankin and Han, 2019). BIPOC players normalize near constant racial epithets, minstrelsy, and tokenization (Leonard, 2006; Gray, 2018; Passmore et al., 2018; Ortiz, 2019). Youth, older, and/or disabled players are discouraged from gameplay due to ability-restrictive interfaces, game mechanics, and exclusionary research practices (De Schutter and Vanden Abeele, 2010; Spiel et al., 2019). The need for relief is greater among these groups, yet discrimination complicates even these highly modifiable avenues for coping with life.

Intersectionality and Plurality

Regardless of how one *identifies*, people are *identified* through whatever representations are available: avatar skin tones, voices, slang, usernames, *etc.* (Kafai et al., 2007; Williams et al., 2009; Passmore and Mandryk, 2018). How one is identified often determines how they are treated. Where marginalized identity axes are concerned, experiences of discrimination are non-linear. Coined by Crenshaw (1991), *intersectionality* refers to the specific ways people are disempowered across compounding facets of identity. For example, LGBTQ2S+ women of color are exposed to significantly more discrimination than non-LGBT+ women of color (Balsam et al., 2011). Such experiences differ in the qualities and the quantities of violence experienced by women of color with disabilities. Intergenerational transmissions of trauma notwithstanding (Bird, 2013; Chief Moon-Riley, 2017), health outcomes differ significantly between intersections of identity not only due to increased rates of exposure to discrimination along one axis or another but also due to the unique ways marginalized axes compound (Krieger, 1999; Balsam et al., 2011).

Within gaming studies, Rankin (Rankin and Han, 2019), Gray (Gray, 2012b, 2018), Shaw (Shaw and Friesem, 2016), and Gibbons (Gibbons, 2015; Holloway et al., 2019) depict tensions between the benefits of online gaming, the costs of adapting to discriminatory violence, and the moments of successful strategies where systemic barriers are overcome. They demonstrate the plurality of player experiences at the ranging intersections of material inequalities and histories of stigma: how variable beliefs, perceptions, and experiences are even when analyses are limited to single demographic axes. Their work further supports Krieger's findings that the nuances of coping require qualitative methods of self-report (Krieger, 1999); quantitative generalizations often obscure these nuances in plurality, lacking ecological validity while encouraging demographic tokenization.

Decades of epidemiological research show health, well-being, social power, coping, and identity as inseparable (Krieger, 1999; Pascoe and Richman, 2009). Coping is culture- (Kuo, 2011), gender- (Szymanski and Henrichs-Beck, 2014), orientation- (Nadal et al., 2011), ethnicity- (Neal-Barnett and Crowther, 2000; Brondolo et al., 2009b), class- (Scott, 2004), education- (Lazarus and Folkman, 1984), and affiliation specific (Sellers et al., 1997, 2001). How one copes is determined by emotional responsivity (Pennebaker et al., 1988; Stanton et al., 1994), socio-historical contexts (Chief Moon-Riley, 2017; Mosley et al., 2017), awareness of privilege (Fujishiro, 2009; Black, 2016), novelty (Young et al., 2019), over-exposure (Miller et al., 2007; Brondolo et al., 2009a), beliefs surrounding both identity and what constitutes discrimination (Brondolo et al., 2009a; Dale et al., 2018), as well as individual preferences for coping strategy (Noh and Kaspar, 2003; Pascoe and Richman, 2009). Furthermore, coping is immediately contextual: how one copes with the stress of a sexist boss differs from coping with a sexist stranger or from coping with sexism in leisure (Walker et al., 1977; Bacchus, 2008; Szymanski and Henrichs-Beck, 2014).

Design Considerations for Stress and Coping

Quantitatively, marginalized identities compound in their exposure to violence and stress, with disabled non-binary Black and indigenous people of low income exposed to the highest rates of violence in the US. This does not mean that these groups *report* the highest frequencies of discriminatory experiences. For example, Greer (Greer et al., 2009) shows that African-American men more sensitively report experiences of discrimination than African-American women despite lower overall frequencies of exposure. Racism can be over-attributed to European-Americans (Burgess et al., 2011), and sexism is more attributed to men (Inman and Baron, 1996). Privilege awareness is often positively correlated with guilt, leading privileged *and* socially aware participants to over-report inequities (Black, 2016). Individual perspectives on what constitutes discrimination, personal life

experiences, the relative novelty of exposure—what people experience and how they manage the stress of those experiences: each underlies who reports what types of experiences and to what degree.

Generally, the participants accurately report on their experiences when directly asked (Axt, 2011). As Krieger (1999), Lazarus (2000), and the above-mentioned authors show, self-reports where discriminatory stress are concerned can range greatly in their accuracy. This is largely due to how we adapt to high levels of chronic, systemic stress. Cortisol, the hormone responsible for initiating recovery from acute stress, accumulates when stressors (such as discrimination) occur with such frequency that the acute stress recovery response is incomplete when the next stress response is activated (Miller et al., 2007; Pascoe and Richman, 2009; American Psychological Association, 2016). Normalization (allostasis) is a coping response to this chronic saturation of cortisol due to interrupted recovery, lowering one's overall baseline for activation over time (Schulkin et al., 1998; Miller et al., 2007; Young et al., 2019). Generally, the experiential intensity of an acute stress response can be "dampened" at a cost of maintaining a higher baseline of stress (Alvarez and Juang, 2010; American Psychological Association, 2016). Being "used to it" or normalizing discriminatory stress, however, does not mitigate its long-term consequences to health (Pascoe and Richman, 2009; Karlamangla et al., 2013; Young et al., 2019), from higher risk of illness and neurological impairment (Miller et al., 2007; Treadway et al., 2019) to social reclusion (Willner, 1997; Riles et al., 2019). Resilience to stress declines over time due to deactivation of dopamine receptors (Treadway et al., 2019), tying chronic stress to lower motivation, impulse control, decision-making, focus, and effort discounting (Gassen et al., 2019; Treadway et al., 2019). Worse still, as an adverse, accumulative, chronic, and intergenerationally transmitted health factor, the immediate absence of discriminatory events does not necessarily indicate an absence of discriminatory stress (Miller et al., 2007; Mathur et al., 2016).

Considering the "toxic" norms of discrimination in gaming, stigmatized players appear substantially disadvantaged when gaming for relief. To better understand the extent, nature, and degree to which discrimination affects player experiences, the benefits they reap from gaming, and how these factors influence game behaviors across a spectrum of player identities, we build on Gray's, Ortiz's, and Fox and Tang's foundations. Acknowledging our breath necessarily lacks the depth of their studies, we attempt to shore up ecological validity by accounting for the factors and dynamics above.

METHODS

Background and Frameworks

To design with as much control over these factors, we reviewed literature on discrimination and coping across gender, ethnicity, age, disability, social class, and cross-cultural histories of modeling coping. These pre-study efforts helped inform (and limit) our questionnaire design. We integrated this knowledge into previous design standards for conducting research with marginalized groups in HCI (Passmore et al., 2018) informed by Critical Race Theory (Delgado et al., 2001; Finda Ogbonnaya-Ogburu et al., 2020), Identity-Based Motivation Theory (Oyserman, 2008), historical materialist epistemologies, and phenomenological elicitation. Patricia Hill Collins (Hill Collins, 2002), Helen Cixous (Sellers, 2003), Frantz Fanon (Fanon et al., 2004), Peggy McIntosh (McIntosh, 2003), Dean Spade (Spade, 2015), and Audre Lorde (Lorde, 2012) inform the theoretical background and language used in survey to ensure a shared, preliminary understanding of stratified experiences. Petitmengin (2006) and Giorgi (2010) inform design considerations for eliciting experiential self-reports, namely, how to use question order, word choice, and reflective prompts to prime participants, how to focus them on the experiential (rather than ideological) aspects of those experiences, and how to do so without biasing (Trnka and Smelik, 2020) their responses. Our analysis is deeply indebted to and influenced by intersectional frameworks; however, as non-Black settler researchers, we lack the situatedness required to employ it. Thus, our analysis is limited to a more general view of "compounding" (rather than intersecting) axes of identity.

Survey Design

Gathering accurate data for the purpose of comparing a wide range of experiences and degrees of privilege required, we design our survey iteratively, co-constructing questions with players of varied ethnicities, genders, socioeconomic and educational backgrounds, disabilities, and ages. Extensive pre-testing of question wording, descriptions, question types, and survey order was imperative to ensure that the data gathered under priming were sensitive, accurate, and non-leading. For example, after a battery of introspective demographic and gaming experience questions, we asked the participants to "select any (of the following) systemic source(s) of oppression you experience while gaming." Knowing that participants vary in their familiarity with, say, "classism," examples were given to *cue* the participants (e.g., "I experience relative poverty or constantly struggle with the cost of life") earlier in the survey. Pre-tests established that the participants who did not relate to class struggles overlooked these examples, opting to describe other phenomena in open fields later in the survey. Those who did relate often described highly detailed, direct experiences of class-based discrimination related to their gaming experiences. Techniques like these maintain a social-identity-centered focus, engender trust in *our* identification of systemic oppression, and, by providing a large range of questions and prompts, help mitigate numerous response and measurement biases (Trnka and Smelik, 2020).

Data were gathered across several axes in open and closed form. Appended for this survey's purposes, the sections include:

(i) Identity measures: With discrimination linked to identity and our focus on compounding axes of identity, we gathered substantial demographic information. After briefing the participants, the survey opened with the request asking them to self-describe. This allowed the categorization of participants on aspects of their identity that they felt were

important. Specific identifiers of gender, age, household income, social class, education, sexuality, disability, gaming availability and habits, ethnicity, and generation were gathered (but not required). With a prior work identifying that the absence of representation is experienced as discrimination but often not labeled as such (Passmore et al., 2018), the participants were asked to describe instances (if any) where they related to or identified with game characters/worlds and why. This was partly for gathering data on indirect discrimination and partly to prime the participants to reflect on their gaming relationships.

(ii) Discrimination in digital games: Following Krieger (1999), we first presented check-all-that-apply questions about foci of systemic oppression in gaming contexts (e.g., racism, colorism, body-shaming, sexism). Prompts preceded open fields by asking the participants to describe instances of recurring discrimination in detail. Sources, situation reports, accompanying feelings, and emotional and behavioral reactions to these forms of discrimination (if any) were requested.

(iii) Debrief: Debriefing instructions, contacts for professional aid, and researcher contacts were provided, as was an open field for overlooked factors, comments, and survey feedback.

Sampling

Ethical approval was obtained from the University of Saskatchewan Research Ethics Board. Demonstrated as a reliable and validated platform for gathering representative US samples (Kittur et al., 2008; Mason and Suri, 2012), the participants were recruited through Amazon's Mechanical Turk (MTurk). To facilitate diversity in the participants, we released a pre-survey to gather demographic information and invited people from underrepresented groups to complete our full survey. Participation required an informed consent, mandating a minimum participant age of 18. The participants were paid $3.50 USD compensation for completion of the 20-min survey. They were informed that their identities would remain confidential and that no deception was involved but that they may leave contact information for follow-up or study release. Data were collected over 2 days and resulted in 241 total responses. The time spent per question was evaluated to screen for attentiveness to each question.

Data Analyses

We conducted both between- and within-group analyses per best practice for studies on perceptions and experiences of demographic groups (Cokley, 2007; Phinney and Ong, 2007).

Thematic analysis proceeded as per Braun (Braun and Clarke, 2006) and was conducted in SPSS 25.0. We closely integrated and followed best practices for analysis and construction of coping hierarchies as per Skinner et al. (2003). In addition to the SPSS dataset, a reflexivity journal was kept in all phases of analysis to track interpreter presumptions, codes, themes, and organizing families and to monitor analyst biases due to expectations.

Approach I (inductive, thematic): Each open-ended question was separated from other data and analyzed independently. Recurring experiential units, keywords, thematic trends, and proximal semantic units were recorded. An identical second round of analysis was conducted 1 week from the previous round, having bracketed prior results and randomized question response order. Lower-order codes, potential themes, and organizing categories (primary strategy, secondary strategy, *etc.*) were recorded and then compared to the first round's constructs for similarities and robustness. The results were grouped into "item pools" (Skinner et al., 2003) according to conceptual similarity and combined when differences in descriptions *and* codes were merely lexical.

Approach II (inductive, organizational): The participants' descriptions varied greatly in length and detail, with some participants describing multiple coping strategies for multiple forms of discrimination; proportion reporting, however, demanded that these experiences be segmented into units prior to thematic assignment. Following segmentation, themes were constructed and attached to each experiential "unit" from each description and then compared to the results from Approach I. From this comparison, a near-final draft of codes and themes was constructed and then organized into "families" (Skinner et al., 2003). The results were input to SPSS as new variables. A second round of this approach was conducted several days later, using an unmarked copy of the dataset in SPSS, and then compared to the first to test for consistent assignment of descriptions to codes and themes.

Approach III (deductive, verifying): With codes, themes, and organizing families finalized, code and category assignment took place cross-survey. Each participant's set of responses was treated as a case (considered in the context of *all* their other responses) and analyst interpretations were limited to assigning previously identified codes and themes. This "in-context" analysis constructed several new themes and another test of code unidimensionality (Bandalos, 2002). Some code assignments were modified as in-context interpretation clarified description meanings. We later checked for errors with a final pass, and the results were quantitatively analyzed in SPSS to report proportions.

Themes, subthemes, and coding structure are discussed in the results. To avoid contamination of our context-specific findings, a comparison between our taxonomies and others was conducted only after coding was completed.

Sample Composition

Of the 241 responses, two "participants" were deemed bots and nine participant responses were removed for low effort (e.g., one-word responses or, in one case, trolling, as determined by inconsistent self-reported identifiers with highly racist and sexist responses and low effort). After applying exclusionary criteria, the sample ($n = 230$) was binned into demographic categories (e.g., race, gender, class). If self-described identification conflicted with a participant's demographic data, self-description determined categorization. Other than those who preferred not to identify, the participants self-described as: White ($n = 78$, 33.9%), *A*sian ($n = 42$, 18.3%), *B*lack ($n = 49$, 21.3%), *H*ispanic ($n = 41$, 17.8%), or *N*ative American ($n = 1$, 0.4%). A total of 18 participants identified as "multi-racial" without an exclusive

preference for a racial category (Mixed, 7.8%), two women identified as trans (0.9%), and one participant identified as non-binary (*Nb*, 0.04%). There were 99 participants who identified as Women (43%) and 130 as Men (56.5%). Furthermore, 16 participants identified with Disabilities (7%), and 24 participants identified with *LGBTQ*I2+ (10.4%). From yearly household income after taxes, education, and self-described socio-economic status, 20 participants identified as upper class (*Uc*, 8.7%), 109 as middle class (*Mc*, 47.4%), and 101 as lower class (*Lc*, 43.9%). Age ranged from 18 to 58 years ($M = 33.5$, SD $= 10.36$). Five participants did not currently play digital games, one indicated no time to game, and all others averaged at least 1–10 h of gaming per week.

RESULTS

Exclusionary and Inclusionary Criteria

There were 63 participants who describe no recurring experiences of discrimination. Of those who did, 14 observed others' experiences but described no first-hand experiences. As we asked for "recurring" experiences during digital gameplay, descriptions of a single event and events outside digital gaming ($n = 1$) were excluded. Some mistook "being annoyed" as systemic discrimination ($n = 5$, 2.2%): "I (made) just a little bit of a mistake (in game) but I was scolded by many people," *WWoUc32*. All five were among the 17 (7.4%) participants highly dismissive of discrimination as an experience altogether, identifying it as "unimportant," imagined, or a "tactic": "There is no discrimination in video games. Not to me, nor to anyone who I've played with online in the past 17 years", *HMeLc32*. To ensure that the results were exclusive to recurring, first-hand experiences of discrimination, these 33 cases were excluded from coding for discriminatory sources and coping strategies. We included 23 participants citing "no experiences of discrimination" but who described systemic discrimination. They believed that their experiences were unique to them (rather than systemic), were "deserved," or were universal (experienced by "everyone").

Topology of Discrimination

The players were asked a check-all-that-apply question for "systemic source(s) of oppression you experience most often while gaming?," including racism or colorism (overall 28.3%; 42.8% of BIPOC participants), sexism or genderism (30.9% total; 56% of non-cis-Men), classism (7.8%; 18.6% lower class), ableism or neurotypicalism (1.7%; 25% disabled), colonialism or imperialism (3.5%), cultural biases (16.5%), nationalism or politicalism (12.2%), body-shaming or attraction biases (11.7%), and none (40%). Other sources included: religious ($n = 3$), prejudice against new players ($n = 3$), ageism ($n = 2$), and motherhood ($n = 1$). Some participants did not affiliate with systemic oppression here but described recurring experiences of systemic oppression (e.g., "ableism" was not selected but ableist discrimination was described). Many participants indicated recurring discrimination across multiple axes, but the descriptions commonly focused on one axis (often race or gender).

We asked the participants two open-ended questions to collect data on recurring experiences of discrimination during digital game play: "Describe a recurring situation that left you feeling particularly discriminated against, over-looked, or mis-represented from your experiences in digital gaming. Please describe the game, situation, and what about this experience left you feeling this way," and "In your own words, please describe how you cope with discrimination (if any) in video games." The participants describe multiple coping strategies relative to the source and the type of discrimination. Almost all descriptions of discrimination were accompanied with strategies for management and emotional states. Thus, the descriptions were segmented into four categories: the *target* of discrimination or axes of identity, the discriminatory *act*, events, or stimuli considered as discriminatory; the participants' *feeling* during and after these events; and their coping *strategies* or reactive management of discriminatory stress.

Targets

Target codes were almost exclusively demographic descriptors (i.e., race, gender, class, appearance, sexuality neuroatypicality, nationalism, ability, age). Skill (in-game performance) was a minor subtheme. Outside of ableism, almost half of the skill themes were co-present with ageism: "undue" judgment of older players' performance: "I wasn't as fast as some of the people in multiplayer. I'm older and not as well-tuned with the controllers as the younger guys," *AMeMc52Lgbt*. The class was exclusively described in reference to inaccessible technology (e.g., high-fidelity inputs), purchasable game assets (e.g., "skins"), or material constraints on time: "I can't be accepted in (multiplayer games) because I don't have a boat load of time to play as some people do," *WWoLc44Lgbt*.

The *targets* are determined by how players are identified, not necessarily how they identify themselves. Real *and* digital attributes such as avatar skin tone, accents considered as "ethnic," character features conveying "normalized gender," atypicality—conveying these was described as creating vulnerability and risk and, in some cases, "inviting" discrimination. The *targets* of identity in digital play are hierarchical and demographic and correspond to real-world power dynamics and inequities. A player's identity is *inferred* to mirror a digital signifier's stereotypical, socio-historical meaning.

An illustrative example can be seen in the participants' descriptions of "mistaken identities":

> I am a male, but when I created my online character for GTA Online, I made a female character since you couldn't play with a female in the story mode. While playing, I never spoke on the mic, but I noticed how other players would assume that I was a female and that my gaming skills would be "lesser than." For example, when playing with a group of people on a heist, they would designate me with the "easier" jobs. WMeMc29

Mistaken identity descriptions commonly include: (i) detachment, as the player did not identify with the intended *target*, (ii) newfound empathy with those affiliated with the intended *targets* of that specific discrimination, and (iii) the

TABLE 1 | Four superordinate themes for discriminatory acts, with subthemes for each.

Rendering invisible (i.e., erasing/ minimizing identity)	Rendering grotesque (i.e., distorting identity through hyperbole/ stereotype)	Conflict (i.e., direct, violent action)	Gatekeeping (i.e., barring authority/ access)
Belittling	Sexualizing	Trolling	Barring access
Diminishing	Objectifying	Doxing	Lowering others' expectations
Silencing	Misrepresenting	Arguing	Presuming inadequacy
Shunning	Stereotyping	Mocking	Subordination
Dismissing	Tokenizing	Harassing	
Gaslighting	Targeting		
Absent representation	Outing		
	Slurs		
	Casual racism		

harasser maintaining and often escalating tactics when corrected (e.g., harassers' "doubling down" on discriminatory actions). Consistent with literature on the proteus effect (Yee and Bailenson, 2007; Gutierrez et al., 2014), these experiences were described as "enlightening" for those inexperienced with identity violence. Mistaken identification and second-hand observers of discrimination—especially those relating past discrimination against their *targets* to others—share descriptions of feeling sympathy, frustration, sadness, and guilt. These descriptions are distinct from first-hand experiences: more intellectualized, less intense, and shorter-lasting.

Acts

Discriminatory *acts* were divided into four superordinate themes with multiple themes using the criteria of 4+ independent descriptions to constitute a theme (see **Table 1**). All types are sharing qualities of "threat" —to one's physical, social, mental, or emotional well-being—and exclusion on the sole basis of identity axes. Discriminatory *acts* are described as harmful, negative stimuli in the form of presence (e.g., slurs, gatekeeping, profiling, targeting) and absence (of representation, similar players, respect, *etc.*). *Acts* were mostly described as "frustrating" or "annoying," with less marginalized players exclusively citing "surprise." Frustration—or agitation with impeded purpose—was often proximal to beliefs around the ease of *acts* relative to the burden of its effects and/or the "superfluous" presence of *acts* despite their irrelevancy to gameplay, performance, or enjoyment: "(They) called me a "dumb white bitch," also told me "Go have your daddy **** you again." This was literally over a healing issue in a video game where a sunflower is a healer. Crazy to me," *WWoMc37*.

Conflict *acts* were less common but described as most threatening to the players' real-life safety. They are direct, recurring, and focused. Doxing, harassment, and arguing exposes vulnerable player information (home addresses, real names, social media accounts, *etc.*). Rendering invisible subthemes describes feelings of identity or agency minimization (sometimes to the extent of erasure); rendering grotesque themes describe distortions of identity through hyperbole or inaccurate magnification (e.g., minstrelsy). Players describe both negatively impacting social and personal legitimacy and/or self-worth on personal and social levels. Gatekeeping, the most indirect of *act* themes, was sometimes explicit but more often the intended result of other *acts*. Women and LGBT+ players frequently referenced gatekeeping and sexual harassment. Subthemes of rendering invisible or rendering grotesque were frequently described by players of color—especially women of color.

Supporting the compounding nature of *acts*, Hispanic players recurrently cited the lack of representation, women subthemes of sexualizing and harassment, and Hispanic women recurrently lacking representation *and* sexual harassment. Black-coded players regularly cited slurs and tokenizing, while White-coded players often cited no discrimination and denial or dismissal of discriminatory experiences. Those who spoke multiple languages tended to describe the risk of being "outed" or *targeted* due to their accent. High performance in game (mention of "winning") was described as inviting rendering invisible/grotesque *acts* (most frequently, slurs) and, when combined with being outed, conflict.

Topology of Coping Strategies

Strategies cover a range of described strategies for managing with discriminatory actions (see **Table 2**). Every described *act* was accompanied by descriptions of learned strategies for its management. Some are generalized (e.g., normalization), some are context specific (e.g., altar avatar), and some are *act*-specific (e.g., blocking sexual harassers). Multiple codes for each participant require that we present proportions for ethnicity and gender per superordinate theme. The proportions for *strategies* are presented also by factors of race and gender (see **Figure 1**).

Endure/ignore descriptions are players' primary *strategy* despite many deeming it largely "unsuccessful" —especially when *acts* tend to increase in directness and/or frequency. No descriptions (beyond those mistaken about what constitutes discrimination) show passively enduring/ignoring as a "solution" to *acts* and rarely as "successful." Lack of functionality in addressing *acts* frames this *strategy* as a desire more than a behavior. Seek social support themes, which include support inside and outside digital contexts, never include reliance on support from other players; descriptions always reference friends, family, or community. Mute self and other themes for modifying the digital self are described as a resort, never a preference, which is unreliable due to its infrequent availability (e.g., premised with "if the option exists") and therefore sees low frequencies.

The second most frequent *strategy*, modifying experience, depicts players who change frames for understanding the *act* in response to discrimination. This can mean denying *acts* any reaction ("I cannot and will not allow their feelings to have any level of control over me"), forming generalizations or prejudices against gamers ("people online are toxic"), devaluing "gaming" as meaningful or significant, or, most frequently, combining expectations of discrimination in the game with those from other contexts:

TABLE 2 | Seven superordinate themes for strategies for coping organized by avoid to approach (top to bottom).

	Superordinate theme (count)	Description	Subthemes
Avoid	Endure/ignore (106) Asian−48% Black−53% Hispanic−51% Mixed−22% White−45%	Attempts to ignore, tolerate, or passively not engage with the act	Endure/ignore Tune-out Focus elsewhere Be silent Quietly hope
	Modify the digital self (19) Asian−12% Black−6% Hispanic−10% Mixed−17% White−5%	Altering the digital representation of targets to avoid acts	Hide Alter character/avatar/username Avoid/disable chat Mute self
	Modify the digital environment (28) Asian−7% Black−18% Hispanic−12% Mixed−11% White−12%	Removing or limiting the source(s) of discrimination from digital space	Mute/block players Play only with Friends Appeal to authorities/report player Switch server/game world
	Modify the experience (74) Asian−45% Black−22% Hispanic−51% Mixed−11% White−27%	Cognitive reframing to reduce the acute power of acts	Normalize discrimination Rationalize discrimination Empathize with discriminator Devalue players/game/gaming
	Modify/dismiss self (68) Asian−48% Black−16% Hispanic−34% Mixed−33% White−26%	Engagement editing or changing one's personal values, beliefs, or goals	Narrow interests Vow to assert future self and take pride Minimize/dismiss feelings Join-in with discriminator Switch tasks/game Return to familiar game Go offline/cease playing
Approach	Seek social support (33) Asian−14% Black−20% Hispanic−10% Mixed−22% White−12%	Seeking or involving others for support	Engage with family Engage with Friends Vent or relate to others online Seeking "like-minded" players Seek bystander intervention
	Direct confrontation (50) Asian−7% Black−20% Hispanic−29% Mixed−56% White−19%	Active, aggressive engagement with discriminatory sources within social spaces	Call out discriminator Draw attention to discrimination Outperform discriminator (revenge) Harass or dox discriminator

The (count) is the number of codes for that strategy; the percentages are the proportion of participants identifying in that group who reported that code. The columns provide a description of the strategy and the subthemes that were coded as belonging to that strategy.

> I've never experienced anything beyond the normal vitriol commonly experienced. WMeLc58Lgbt

Black men and Hispanic or White women tended to modify their digital environments through *strategies* that remove their perception of discriminatory players (mute/block players), appeal to authorities (moderators, guild leaders), or report players. Women exclusively modify their digital self, with those of mixed or Asian coding tending to report more than the other groups. Black and Asian-coded women tended to not report engaging in direct confrontation compared to other groups (Hispanic and Black men and White women), citing the "futility" of it "changing anything" and risking the escalation of abuse. Normalize, rationalize, and empathize codes were never positive, conveying a somber, regretful necessity of acknowledging oppression as a norm "to be accepted." Black men were unlikely to report modify/dismiss self, but Asian participants and Hispanic men tended to report this approach.

> I basically try not to get to "wrapped up" and emotional about the situation. I realize games represent a microcosm of how people act in the real world. HMeLc28

Specific approach strategies are relative to a player's situational agency, beliefs, and inherited culture, as discussed by Fragoso

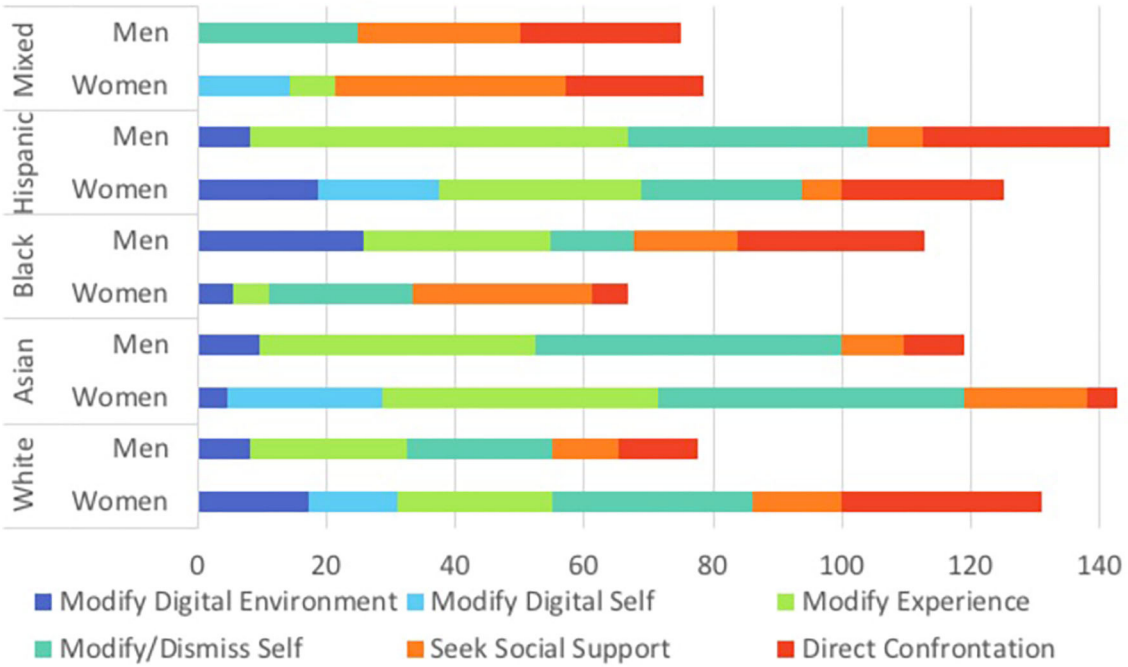

FIGURE 1 | Superordinate strategies for coping with discriminatory acts, by race and gender. Endure/ignore strategy is not included as it dominated the approaches (see **Table 2**) and was often the initial strategy reported. The bar length shows the percentage of participants, identifying by race and gender category, reporting each strategy. The counts exceed 100% as the participants reported multiple coping styles. The counts were normalized by the number of participants in each identity group, allowing inter- and intra-identity factor comparisons.

and Kashubeck (2000), Noh and Kaspar (2003) Yoo and Lee (2005) and Krieg and Xu (2018). For example, Asian men and women show low frequencies for direct confrontation compared to other groupings. Many Hispanic men reported modifying the experience of discrimination and Black-coded men tended to describe emphasis on pride and vows to assert future self and taking pride:

> I often see negative stereotypes about minorities in all aspects of life. It creates a problem, especially when trying to convey to my children about Black pride. BMeMc45

Strategies are complicated to parse given their intertwined, internalized, and anticipatory nature. LGBT+ players and women tended to cope with more acutely violent *acts* (e.g., doxing, harassment) by engaging in strategies of self-effacement (modifying/dismissing the self or digital self). Rarely is this through self-depreciation or joining-in with discriminators *via* self-directed humor; more often, players hide their identities [as in Gray (2012b), Fox and Tang (2017), Vella et al. (2020)], switch tasks/games, or alter their beliefs (narrow interests in games/genres, generalize, devalue the medium or players). As a result of this *strategy*, many players cite concerns around their *targets* being "outed" and/or "exposed," thus inviting subsequent *acts*. Outing commonly escalates in frequency and severity of rendering grotesque *acts*, culminating in more violent themes of conflict.

Seek revenge (outperforming the discriminator) is unique in its being both an *Act* and a *strategy*. These descriptions conveyed *gravitas*, a high-risk "gamble" of stereotype confirmation *combined* with risks of being outed for proving one's legitimacy through in-game performance. Some (mostly men) relished this gamble: "I'd target specifically them and kill just them in the most irritating ways possible," BMeMc44.

We coded for discrimination as *explicitly* normalized; 25% ($n = 42$) of participants who described first-hand recurring discrimination did so as a "given": a daily experience indistinguishable from discrimination experienced in other contexts of everyday life. The proportions for normalization codes generally match the sample demographics; however, those impacted across multiple *targets* more frequently described normalization.

Sequential Strategies for Coping

Players describe coping as relative to tools-at-hand. With in-game tools often unavailable, the chosen strategies depend on an initial assessment of their available resilience:

> You really have to pick your battles. AMeLc32

The coping strategies are tiered when *acts* persist. Lower-cost *strategies* are attempted and fail, or players with a higher vulnerability to identity violence anticipate discrimination from game spaces:

> At first, I will try to confront the problem head on. I will try to talk to the people committing the discriminatory behavior. If that doesn't work, then I will go to the game moderators (if there are any) and report the player. If that doesn't work, then I will just try to avoid communication with the player. BMeMc36D

Where discrimination persists after initial desires to endure/ignore, the players describe secondary and tertiary strategies. Avoid strategies are often subsequent to the failure of approach strategies mitigating discriminatory stress. Tertiary strategies (e.g., reverting to a prior game or going offline) often follow a significant accumulation of discriminatory stress. The most common sequence was endure/ignore, mute/block the source ("if possible"), and, if exposure persists, players hide, switch tasks/games. Players seek out previously "tried and true" games at this point, "even if I'm already bored of it," or "games where I have friend groups to laugh about these things with." Generally, modifying the digital self or environment is a second-to-last resort, proceeding failure of lower effort strategies. Seeking social support, going offline, or modifying the self were last resorts.

Compounding Privileges, Oppressions, and Pluralities

> It's alienating and it reminds me of how much discrimination still exists against Asians even when it doesn't manifest often in my daily life. AWoUc25

Levels of systemic privilege roughly correspond to both type and severity of *strategy*: Hispanic and Black men and Hispanic and White women without disabilities tended to report "approach" or "problem-focused" strategies (like direct confrontation); upper-class, able heterosexual White men reported few-to-no experiences of discrimination; upper-class, heterosexual White women and non-LGBT middle-class Black men tended to describe "fighting back:" high effort approach or interpersonally directed strategies. Black women, trans, non-binary, and disabled participants of lower class tended to describe "emotion-focused" or intrapersonally directed strategies when digital gaming. No players who describe experiencing discrimination also describe "waiting out" ableism, ageism, sexism, classism, or racism as a successful tactic, as without high cost, or describe a belief that wide-scale systemic stressors are addressable through game interactions. Be it explicit or implicit, marginalized players acknowledge the barriers to resolving sources of discrimination, opting to instead problem-solve *how to cope with the stressor's effects*. This contrasts more privileged participant descriptions of in-game stressors as problems with potentially direct resolution (ignoring infrequent slurs, blocking, *etc.*). Recognizing the difficulty of affecting systemic change, those who experience frequent discrimination across several *targets* tended to report "avoid" or inward-directed strategies to regain security, control, and agency.

Identity factors do not guarantee a player's experiences, beliefs, or values. Some highly privileged players report high frequencies and intensities of discrimination; some socially marginalized players describe few to no discriminatory experiences and hold oppressive beliefs:

> I've never felt discriminated against, but I'm not a millennial poofter or professional victim. WMeMc48Lgbtq

Generally, however, demographics—social identity factors replete with their socially stratified values and power—inform discriminatory stress exposure, amount, severity, tolerance, and coping strategies. Underlying the intertwined relationship between severity and type of *strategy*, tolerance for *acts*, self-reported marginalization, and number of compounding *targets* is a players' history of stress which they bring to the game context. Grouping players by total number of compounding *targets*, we observe similarities in their data. Mapped onto a u-shaped curve (**Figure 2**), with the x-axis containing the number of socially oppressed *targets* (from upper-class, able White men to lower-class LGBTQ+ Black women with disabilities), at each extreme we see low frequencies of self-reported discrimination and higher preferences for "avoid" coping strategies (e.g., endure/ignore). The midpoint represents players with the highest frequencies of self-reported discrimination, identification across one to two marginalized axes, and more frequent use of "approach" strategies (like direct confrontation). Labeling each fluid point on this spectrum "the privileged few," "the emboldened many," and "the conflict weary" is one way of descriptively representing the intertwined nature of *targets*, *acts*, and *strategies*. Using a descriptive spectrum rather than demographic labels better allows for plurality in experiences while resisting tokenization.

The Privileged Few

> The only "discrimination" I've seen in games is by the skilled against the unskilled. How you cope is you get better at the game. MMeMc50

Low in proportion and with few-to-no first-hand experiences of discrimination, players on the far left of this spectrum identify within privileged norms. Largely, but not exclusively, they are White middle-class heterosexual men who mistake "discrimination" in terms of players "being annoying" or "guilting" them over "hypersensitive" reactions. Discriminatory stress, defined by this group, is frustrating more than it is recalling of systemic oppression or trauma. There is confusion over the impact of oppression on agency. Thus, coping involves enduring/ignoring "annoyances," which is often deemed a successful strategy: "I do not deal with racial discrimination, but when I am met with negative situations during gaming, I just learn to live with it. That's the way I do not stress over it," WWoUc24.

Identifying with *status quo*, players here are skeptical of discrimination, assuming their experiences map universally onto others:

> None. Never happened. I could always make a character of color and use female voice during character creation. No one cares that I have a vagina, they just want to play the game. People forget that the Internet is the best anti-discrimination tool to date because

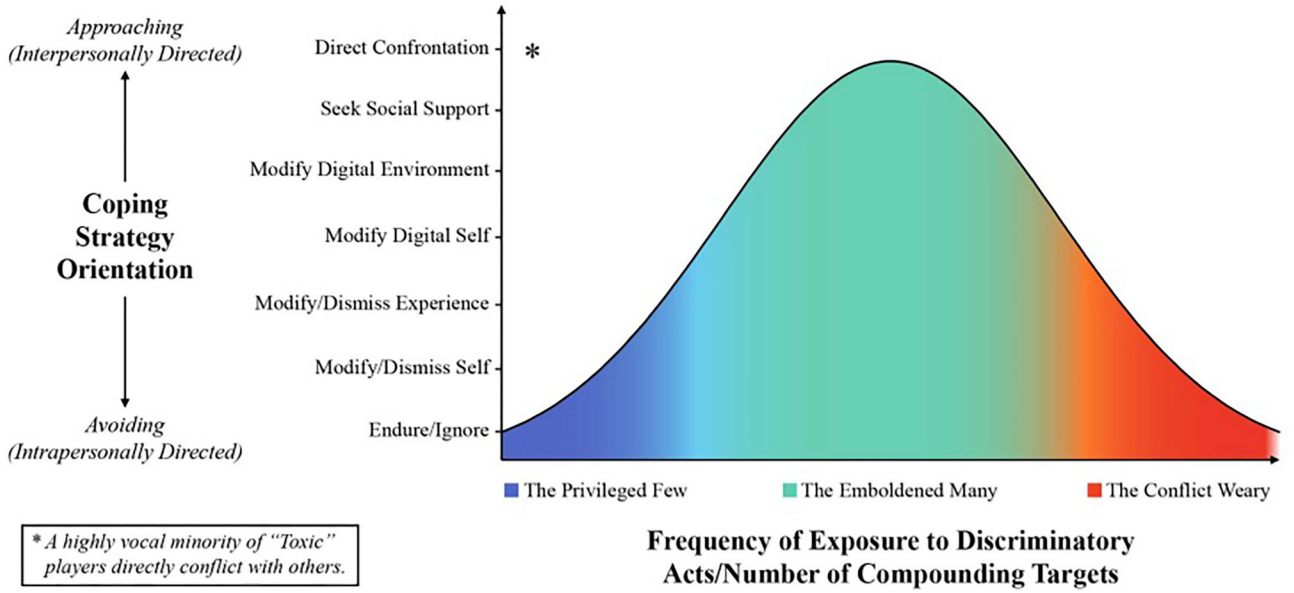

FIGURE 2 | *U*-shaped curve of the general relationships shared between coping strategy orientation and required effort (on the y-axis) and the number of targets upon which discrimination was experienced (on the x-axis). The outlying highly vocal minority of bigoted players with high approach and high conflict strategies are represented by an asterisk.

> no one knows who you are, what life you live, what your job is, etc., unless you tell them. If everyone shut the fuck up about themselves, people could back to judge people on their actions and not their bio. (participant trolling as BWoLc26)

Challenges to *status quo* or privilege (e.g., when other players draw attention to discrimination) is experienced as a challenge to oneself, frequently coped with through dismissal of others' experiences. Linguistic descriptions contrast greatly with those from the privileged few, where universalizing and certainty are common: "discrimination doesn't exist and everyone needs to stop whining," MMeMc50. While the privileged few describe their experienced *acts* decontextualized from systemic sources, and do so intensely, they project their high tolerance for *acts* to all others, deeming low-effort coping strategies such as ignore/endure sufficiently successful.

The Emboldened Many

> I tend to mostly just ignore it and anticipate it. One can completely mute the chat system in (League of Legends), so I tend to do that because I know that that's a simple way to overcome the unnecessary fog of uneducated, dumbed down and juvenile children. Even when I witness the explicit racism I try to ignore it because there's nothing to be done. HWoLc33

Experience for this group varies greatly as it captures the largest spectrum of *targets*, *acts*, and *strategies*. *Acts* for this group include both present stimuli (e.g., slurs, gatekeeping, profiling, stereotypes) and absent stimuli (e.g., lack of representation, similar players, respect, consideration). Contrary to demands from the privileged few to "get used to how Internet banter works" or "just ignore it if it's offensive," the emboldened many most often describe *acts* motivating ("inciting") a reaction and that such actions require "approach" *strategies* but range in belief of its effectiveness:

> Now that I'm older, I don't experience discrimination much. If I do, I simply confront the person and/or engage in trash talk against them. I feel that the gaming community is more toxic than ever, and you have to learn to confront people or they will keep doing it. WMeLc29

Across this spectrum, players *desire* non-approach strategies like ignore/endure but "know it won't go away." Discrimination is "a daily experience," in and out of leisure: "When it happens, I cannot help but be affected. It really depends on the severity," WWoMc37D. While some experience surprise at its severity in a game, most are familiar enough to incorporate discrimination into their identity in forms of resistance: "I am a Black man. I am used to it. It makes me work harder," BMeUc37. Further along the x-axis, coping strategies become withdrawn more than resistant, modifying the self through greater forms of distance from sources and contexts of oppression.

Following *strategy* patterns from the u-shaped distribution, the analysis suggests that this group engages in approach strategies (to the extent permitted by their relative level of stress) to avoid modifying the self in response to discrimination. Depending on available stress tolerance and proximity, the emboldened many is most frequent to leverage energy for conflict when met with discrimination, "proactively" coping. Discrimination is, in a sense, activating (with otherwise

privileged White women showing higher frequencies of directly confronting than White men, for example). As energy or hope in changing oppressive norms reduces, proactive or systemically resistant coping is less described. Less desired *strategies* are required. Players modify the digital self then modify the experience before needing to cope through changes to self (personal beliefs, preferences):

> People are assholes when given the opportunity to interact with others anonymously. I feel bad about it sometimes, but it really pushes me to predominantly single-player experiences. AMeMc25D

The Conflict Weary

> Honestly, most of the time I don't talk at all. I know I should and need to move past it but over the years, people have just shown so much hate online (…) because of the sound of my voice. Now and then I'll confront someone but it takes too much energy to deal with these people. HNbLc24LgbtqD

Commonly, the participants in this group are marginalized across multiple (2+) identity axes. Higher frequencies of discriminatory experiences require higher normalization, underlying the belief for this group that conflict is a waste of already taxed energy:

> Character create I just roll my eyes and try to convince myself it's not the largest part of the game. For online interactions, I usually give a person a few strikes, (…) if it's blatantly racist, that's what mute and report options should be for, though if one is determined enough, they can easily make these options a lesson in futility. BWoMc28Ft

Self-modifying—particularly self-dismissal and narrowing interest—is highest in this group as desires to play certain games or genres is deemed a higher risk than reward. As compounding *targets* increase, we see greater anticipatory coping (like hiding from the outset) and lower tolerance for *acts*—especially from *acts* of rendering grotesque and gatekeeping. Secondary or tertiary strategies (blocking, muting, switching games, modifying self) are employed earlier, even primarily, prompted from few to no *acts*.

Descriptions from the conflict weary are linguistically distinct, containing caveats and non-absolutist words ("suppose," "sometimes,"). Moments of revenge-seeking and willingness to conflict are occasionally described but, here, coincide with descriptions of self-blame. These descriptions accompany high normalization (*e. g.*, "It wasn't that bothersome then, either, I guess," BWoLc22TD). Self-modification and self-denial are prevalent:

> For the most part, I just avoid it happening in the first place. Pick a popular character for my icon that doesn't scream "girl", avoiding voice chat with teammates like the plague. I only voice chat if I'm playing with close friends, and even then it's on a group chat so not with the team. On the off chance I "slip" or something I try to ignore them in chat. I also honestly just try to be better than them, like focusing them if I get the chance, and then asking why they feel so high and mighty when I'm beating them (In... not so kind words sometimes). HNbLc24LgbtD

Considering the multiple axes of oppression facing, say, Black women, or queer and disabled non-binary players (notwithstanding the indigenous, homeless, and larger non-binary, trans-, and disabled populations we failed to sample), the need to survive high levels of discrimination across multiple axes shows itself in the most extreme coping strategies: self-dismissal, self-effacement, and self-modification. These players try new games to find they are inhospitable, hostile to the point that risking hope is an exhausting, Sisyphean endeavor. Lowering expectation of non-discriminatory game spaces, these players accept *gaming* as toxic. With most desiring to seek social support and collective hiding, the risk of self-disclosure forces coping to occur outside game contexts, ceasing play.

DISCUSSION

> I wish it didn't, but it gets to me. AWoMc25

Despite digital utopian (Charles, 2009) slogans of "unprecedented freedom" and "power to the player" because "you are the controller" and "you deserve to game your way," players' lived realities of inequity import to digital worlds. The players bring their accumulative, daily experiences—of harassment, gatekeeping, tokenism, histories of enforced poverty, enslavement, homicide, deportation, imprisonment, residential schools, forced infertility, exile, scapegoating, ghettoization, medical experimentation, profiling, trafficking (Iwasaki et al., 2009; Bird, 2013; Chief Moon-Riley, 2017; Yuen et al., 2019)—into digital game spaces; 60% of players describe being recalled to these histories of systemic oppression during play through recurring forms of discrimination. The players would *like* to ignore such experiences, trading acute stress for chronic autonomic stress (Alvarez and Juang, 2010), especially if digital utopia's promises could be delivered. However, attempts to cope with life's stress through gaming is seen in a return to the inequitable burdens of daily life to which they turn to games for relief. Threats of physical, psychosocial, racial, and sexual violence—trends in silencing, harassing, and gatekeeping marginalized players—reveal identity violence in digital games common enough to be anticipated, normalized, mundane.

Recalling that generalized harassment leads to less rumination than sexual harassment in games (Fox and Tang, 2017), we find that the targeted nature of identity violence in games is a form of adverse stress burdening players already burdened across gender, orientation, ethnicity, race, class, ability, age, culture, attraction, body type, and/or nationality.

> I usually stay quiet or I quit the game/match. (…) Arguing with someone will just get me more anxious and depressed. I'll end up ruminating for the entire day. HMeMc28Lgbtq

The effects of this violence are shown in player descriptions of persistently higher stress, negative affect, self-dismissal. Players are forced to cope by avoiding pro-social tools beneficial

to other players (e.g., hiding signifiers of identity, masking, code-switching, *etc.*) as discussed by Vella et al. (2020) or by using tools for unintended purposes (e.g., using helmets where skin tones are limited to pretend a character is not a White male). Clusters of the emboldened many may feel empowered enough to employ approach *strategies* but do so while coping with oppressive *acts* and the demands of escalation and further risk of self-disclosure. Discriminated players increasingly devalue fellow gamers, gaming as a medium, and, in extreme cases, people altogether. Preferences for games and genres are altered, oppression is universalized as inevitable, rationalized, and generalized, and coping occurs anticipatorily. These changes to in-game behavior, surrounding beliefs to perceptions of self and others, and compounding levels of stress and negativity demonstrate the pervasive effects of coping with discrimination in games.

Cycle 1: Self-Reifying Factors to the Atmosphere of Stigma

Results support the explanations for negative generalizations surrounding gamers and games as "toxic" (Shaw, 2012; Kuznekoff and Rose, 2013). Those impacted by *compounding* oppression more commonly recognize other forms of systemic disadvantage:

> While Black characters exist in games, I often find them more of a caricature and don't properly represent what we know as the struggle. Even putting race aside, something as simple as a diabetic in game would be more interesting, it wouldn't have to be the focus of the game but a part much like mana and health that ignoring it would be a detriment. BMeLc28D

Awareness of systemic oppression itself is shown to induce stress and guilt and impact relief and health factors (Fujishiro, 2009), contributing to stress and unease. Given the normalcy of discriminatory stressors in digital games, players familiar with systemic oppression on one axis describe apprehension, vigilance, an "atmosphere" of oppression—even when not directly targeted.

Though an exaggerated example, the "mistaken identity" cases show the intentions and the histories behind discriminatory acts as felt even by those who do not identify with them.

> I was getting some racial discrimination for this character due to his dark skin. Ultimately, I ended up changing the character for another one. The constant joking around was just too much after that. HMeMc41

Identities are often self-verified through moral behavior *toward* others, and witnessing discrimination can provoke a moral imperative to act in or toward said group (Stets and Carter, 2011). In these cases, one's agency is reinforced through sharing a struggle with others, which players describe through their newfound "appreciation" for experiences of oppression. Dynamics of active commitment (Downing and Roush, 1985), acts and feelings of solidarity, are seen among players who less often experience discrimination (or do so indirectly) but hold beliefs around its injustice.

For a small proportion from our sample, these challenges increase performance, self-assertion, "grit," compelling direct confrontation (seen in revenge strategies Consalvo, 2008; Cicchirillo, 2015; Leonard, 2020). In highly specific conditions, exposure to discrimination *can* benefit sympathy (as seen in literature on proteus effects Yee and Bailenson, 2007; Gutierrez et al., 2014; Ash, 2015) and provoke conflict against discriminatory sources. Players describe calling out discriminators, confronting them, and beliefs around solidarity; however, these instances are among the least common. Almost no participant described engaging in bystander intervention, explaining why no one described seeking aid from in-game strangers. Rather than acting on this moral imperative, we see descriptions of stereotype threat effects, escalation of abuse, and guarding against self-disclosure.

In lieu of gaming culture facilitating social support, players are left describing mostly negative aspects around identification: anxieties around failing one's social identity group or affirming stereotypes (Cadinu et al., 2005; Vella et al., 2020). Such threats impair working memory (Beilock et al., 2007) and executive functions (Cicchirillo, 2015) and provoke coping strategies even if discrimination is merely anticipated (Johns et al., 2008). Witnessing regular identity violence contributes to a general sense of insecurity, vulnerability, and social threat. Coping strategies of generalization, personal distancing, and low investment ("it's just a game") combine, leading players to attribute their experiences of discrimination and unease in *separate* game contexts to games and gamers in general. Recalling that 60% of players describe *recurring*, *first-hand experiences* of discrimination, these perceived elements of unease suggests that more players are impacted by discrimination in and from digital gaming environments than not.

Cycle 2: Desiring Visibility, Coping Through Collective Invisibility

> When I first started playing Fortnite, I started in random group games. In previous games, I would always turn off my voice chat, but I decided to leave it on for Fortnite. I went through a string of games where younger players were saying absolutely vile and racist rhetoric. (…) The only time I turn on voice chat now is if I'm playing with people I know. BWoMc36D

Players prefer to self-identify in spaces offline and online but cannot (Kafai et al., 2010; Barsamian Kahn et al., 2013; Shaw and Friesem, 2016; Passmore et al., 2018). The results further bolster criticisms like Shaw's, showing that representation is important to player experience, but without addressing surrounding systemic oppression, players can be left over-exposed and under-supported. *Fortnite* and *Overwatch* are celebrated for their diversity in character design and appeal to a wider audience (Conditt, 2019), yet player experiences depict a host of direct and indirect barriers even when such tools are available (Callahan, 2018). A curious case study in itself, nearly all women from our sample who mention either game describe: "not a lot of females that game in *Fortnite*, it makes me uncomfortable to speak on the

microphone in groups." Marginalized players learn not to use the tools meant to benefit them:

> When I first started playing online, I didn't disguise my voice and used a female name. (…) They concentrated on hitting on me. Then, when they got rebuffed, they got pissy and concentrated on either actively sabotaging me during the run or just incessantly calling me names. This was so bad I had to stop using any kind of voice and had to change my player names from female to either male or neutral. HWoLc34Lgbtq

Women's "dislike" for first-person shooters has been referenced by players and developers (Au, 2018); however, our results support that players regularly risk discrimination out of desire to play these games (and play them as themselves) but face three times the harassment when "outed" by speaking on microphones or self-representing (Kuznekoff and Rose, 2013). Escalating harassment, conflict, and other forms of violence become less preferable to genre and representational preferences over time and repetition. Chronic discrimination is preference-forming (Dale et al., 2018). Learning to anticipate escalation and exhaustion from repetitive, cyclical conflict leads to more inward-turned coping, more modification of self. Risking overall resilience for potential benefits from gaming is an ill-advised cost–benefit analysis—especially when it involves betraying a learned history of failed attempts to enact lasting systemic change.

> I generally just accept it. There's not anything that can change their perception of my people, not in my lifetime anyway. Only time will change that. If my friends are with me, we do protect each other. WMeLc21LgbtqD

Enduring misogyny, chauvinism, ableism, racism, and classism, the human desire to be seen and find like-minded others is transformed when one is rendered grotesque. Invisibility is preferred to stereotype threats, tokenism, or exposure to abuse. It is often a well-learned distrust in others' construction of their identities that protects against further harm; it is less taxing to cope with being invisible than repeatedly being a target of violence. Unfortunately, invisibility exaggerates the absence of similar identities—inhibiting players from seeking social support *while* magnifying discriminatory voices. Those in the position to discriminate are given more space to do so; those who defiantly self-represent are left over-exposed, under-supported, and further stressed. For new players, coping through collective invisibility looks like an absence of similar others, associating that space with others rife with identity-targeted violence, provoking anticipatory coping strategies of hiding, masking, or rendering oneself invisible. Coping with digital spaces like this forms cycles that feed back into power imbalances, amplifying discriminatory stress on bodies already unduly stressed.

Cycle 3: The Ease of Discrimination, the Accumulative Burden of Coping

Few coping strategies in the context of gaming appear to be "positive" by Lazarus and Folkman's standards (Lazarus and Folkman, 1984). Positive, adaptive strategies are described, also evidenced in Gibbons (2015) and Gray (2018), but are exceptions to the norm. In general, this study presents a largely negative account of a medium notably beneficial and well-received. This negativity may be exaggerated by our study priming negative experiences and requesting players relate them as such or the high sensitivity and negative bias of our analyses. Most likely, this negativity is the result of both, allowing for a more *de*-normalized account of "mundane" identity violence. The barriers to coping through positive channels (social support seeking, in-game moments for reconciliatory dialogue with others, unfettered access to gaming's benefits) are many, but expectations for removal of those barriers are long gone. Feedback cycles create an atmosphere for growing norms of toxicity, for coping through collective invisibility. The results suggest high effort, and risk is needed to access gaming's more "positive" channels for coping even where they do exist.

Contrasting these difficulties are descriptions of the ease with which players and game content offend. Acknowledgment of "privilege" or mention of systemic injustice is perceived as a direct threat by some (often a highly vocal section of the privileged few). Outperforming others "invites" discrimination. Discussed with far greater nuance by Ortiz (2019), *acts* of rendering invisible and grotesque are far more harmful than "friendly banter." This is to show that players engage in low-effort discrimination to regain a sense of agency at the cost of another's. While these dynamics are common to transactional relationships of agency and power (Moghaddam et al., 2002; Berjot and Gillet, 2011), gaming pairs these relationships with a unique dynamic: control over self-disclosure.

> This misuse of (autism) greatly annoys me. As a result, I almost never disclose my ASD status nor discuss the problems that come with having it. AMeLc28D

Heightened rates of harassment in online games can be attributed to "social disinhibition," which suggests that anonymity facilitates violent behaviors (e.g., hate speech, gatekeeping). The relative anonymity of online play supports a lack of direct repercussions for abusers (Fox and Tang, 2017). Lack of accountability benefits discriminators. When combined with an absence of bystander intervention and in-game social supports due to both requiring risky self-disclosure and great effort, a vacuum of negativity is formed. Restorative or corrective player interactions are left without space.

Discrimination and coping share a preference for paths of least effort, even more so in leisure and play than in contexts of work or family (Walker et al., 1977; Yuen et al., 2019). The ease and the casualness with which players can create discriminatory stressors in a game (e.g., using a slur) contrast the length of recovery time required from acute stress events (Berjot and Gillet, 2011). This stress compounds with stress from systemic

marginalization, often compounding with intergenerationally transmitted histories of stress and trauma.

Discrimination is dealt with at a cost, as is resistance to it. Learned anticipation of discrimination is informed by its mundane frequency and insidious variety of sources. Anticipating discrimination becomes an unfortunate necessity for self-protection across multiple exclusionary norms. Expectation reduces the intensity of a stress response, reducing acute stress but at a cost of greater chronic stress (Brondolo et al., 2009b; Liston et al., 2009). Here we see this cost as coping with acute, direct forms of discrimination through employing coping strategies that are, objectively, self-discriminatory: gatekeeping oneself from preferences, hiding, masking, code switching, self-denial. The realities of internalizing discrimination often resemble belief and value adjustments, cognitive reframing, and self-suppression. Ignoring or minimizing acute stress responses to discrimination results in autonomic stress, which can lead to *less* resilience to stress through deactivation of dopamine receptors (Chen et al., 2016), lower motivation, impulse control, decision-making, focus, and effort discounting (Gassen and Hill, 2019; Treadway et al., 2019). These costs to resilience when gaming is meant to be a coping activity are perceived and felt:

> Dealing with those type of people when I am trying to relax is exhausting. HMeLc32

Cycle 4: Equality, Equity, and the Broken Promises of Digital Utopia

> Mostly I'm numb to it as I grew up with the Internet and trolling is something I've dealt with for 25 years and I just don't care anymore. (preferred not to disclose)

The results here, as in Gibbons (2015), Fox and Tang (2017), Vella et al. (2020) and Gray (2012a,b, 2018), reflect a potential for coping strategies unique to digital games: like-minded players can connect over global networks; avatar customization, use of social features like chat, private server creation, and the ability to go offline promote greater control over one's digital environments; identity play for personal exploration and norm-bending (Martey et al., 2014) permits creativity and control over self-disclosure; players are given opportunities for cathartic revenge [also seen in Consalvo (2008) and Leonard (2020)]. When low-demand coping strategies fail, players engage in space-making and refuge-taking. They mute, report, or block players and game elements, exercising control over their digital worlds.

The ingenuity of players in overcoming toxic norms and shoring up agency warrants celebration. However, affordances and realities are distinct. The experiential divide between players utilizing tools for pleasure and those utilizing them to cope is massive. Where the privileged few use affordances to additional benefit, the emboldened many and conflict weary are further burdened by their use to mitigate discrimination. They are *forced from* adverse experiences with uncertainty of success rather than *motivated toward* positive ones. Even where gaming's potential tools are described as consistently available, reliable, and less burdensome, such tools service coping rather than agency. They re-center toxic norms and systemic oppression. This distinction is crucial. The benefits of gaming's tools and the power with which they are wielded are inequal.

When play is designed with the privileged as a frame of reference for new features, marginalized players are subject to increased stress. Microphones and avatars "out" players, inaccurate attempts at diversity further stigmatize, and social tools facilitate harassment. Providing *all* players with tools for greater agency when in unequal spaces results in a magnification of social power imbalances, disserving some groups while promoting social connection between more privileged groups. The inseparability of players from their lived identities means better player experiences must be approached through equity rather than equality, anti-oppression rather than utopian myths about potential and diverse self-fashioning. Digital worlds are not blank slates.

Understanding players means not just understanding how gaming fits into their lifeworld or what they *can* do but how intergenerationally transmitted social power relations determine what they *must* do. These relativities inform desires, perceived and suppressed stressors, transactional agency, and tiered obstacles to play. Interrupting and inhibiting the domino effects and feedback cycles of oppression discussed here are central to create *affiliative* digital spaces and lower identity-based violence. Well-cited discriminatory norms underlie both game spaces and their developers (IGDA, 2014; Srauy, 2019). A collective responsibility, a moral imperative to interrupt the normalization of discrimination is here. For developers, this means implementing features with equity in mind—not equality, benefits—not band-aids for coping, creating accountability in digital spaces, and risking reactions from the highly vocal minority of abusive players. For players, this means leveraging one's available privilege for changing norms in gaming through bystander intervention, providing social support, and demanding accountability around *acts*. For researchers, this means great effort, precision, and social responsibility in methods—in whose stories are told by data to what end.

DISCLAIMERS AND LIMITATIONS

The complications of self-report, normalization, recruitment methods (i.e., MTurk), and the plurality of subjective experiences of social power urge caution when drawing conclusions from this study. To reduce these barriers, we conducted an interdisciplinary literature review (>300 studies), used priming, trust engenderment, pre-study interviews, and co-constructive iterative survey design. Our data analyses were reviewed by non-participant players who confirmed our results, framings, and the implications, supporting that this study accurately

reflects at least their experiences. Still objectively definitive, generalizable claims cannot be made from this study. Truly intersectional analysis requires a lens and sample size beyond our means; the quantitative analysis of this depth is infeasible even had we obtained an n of >20 for each combination of (an already problematic reduction to) three genders, five racial categories, two disability categories, and three classes. We took methodological efforts to correct for normalization, suppression, and the habitual reactivity of coping, but indirect sources of discrimination remain lower as reported than what analyses suggest. Where they appear, our identity-factor groupings are heuristic "more similar than not" categories that insufficiently represent identity (there is no more "a black" experience than there is "a way to cope" with "class" or "disability"). Experiences vary and are pluralistic. Just as we resist tying results to individual demographic axes at a disadvantage to traditional scientific "contributions," we did not evaluate the success or the efficacy of coping strategies. Without *knowing* the participants, judging the "health" of their coping can be discriminatory itself. Striking an optimal balance between experiential accuracy and generalizable comparisons formed an ongoing debate for us across all stages of the research process. With barely the space to represent an already reductive series of intersecting demographics, additional player variables (such as gamer profiles, game preferences, *etc.*) would increase the paper length and analyses exponentially and require an unfeasible sample size. All these complications led us to self-critique and multiple rounds of community consultation to ensure that an overview study of this nature—a taxonomy "writ large" —was accurate, justified, valuable in filling a crucial gap in literature on discrimination and digital games. Finally, we come from an interdisciplinary lens of historical materialist social power relations, which is a bias reflected throughout our study.

CONCLUSION

> I choose not to continue playing the game(s). I talk with others about my experiences. I try to choose healthier games for my children to play. MWoMc51Lgbtq

We provide additional evidence that most players cope with oppression during gaming. Relatively privileged players access lower burdens of stress to react across a greater range of interpersonally directed coping behaviors, while those more impacted by discriminatory stress are forced to cope inwardly, with more severe forms of anticipatory coping deployed earlier. Those more commonly marginalized in American society (disabled, queer, lower-class Black women) are most frequently targeted in digital play. Those more exposed to systemic oppression bring that chronic stress to their games. Of course, these exposure rates are deeply informed by socio-historically situated identity factors imported to the gaming context. With respect to plurality, however, player experiences are more accurately patterned by discriminatory stress exposure rates than demographic variables alone. This stress compounds, accumulates, and burdens players, leading them to seek games and play for relief only to experience further discriminatory stress. Within the context of psychological and epidemiological studies on chronic stress, the long-term detriments these experiences may have on player health are potentially substantial. As a supplement to future studies on precisely this, we provide a comprehensive taxonomy of discriminatory stressors and coping strategies in digital gameplay.

Against discourses of erasure, the results show little willing suspension of disbelief where reminders of physical, emotional, and cultural violence exist. Organizing players with respect to these lived realities of social power grants insight to the ways that discrimination shapes player experiences, beliefs, and behaviors—during gameplay and after. Accounting for spectrums of privilege, *most* players experience recurring discriminatory stress along at least one axis of identity or another. These experiences remain under-reported and over-normalized. The substantial disparities between player experiences along axes of social marginalization provide further evidence that coping with these stressors is itself a compounding burden. Having identified several feedback cycles serving inequitable norms, we see the responsibility for interrupting these cycles falling on those with an expendable privilege to act against gaming's toxic norms. This responsibility is as much a finding as it is a commitment by the authors of this study in our research and our play.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

All participants were 18+ and legally consenting per MTurk standards. Written, informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article. This research was approved by the Behavioral Research Ethics Board at the University of Saskatchewan.

AUTHOR CONTRIBUTIONS

RM and CP contributed to the formation of the research idea, the methods employed, the design of the interview questions, the data gathering, and contextualized the findings and wrote the paper. CP conducted all analyses and proposed the results frameworks. All authors contributed to the article and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fcomp.2020.00040/full#supplementary-material

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