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Exemplification and stigmatization: How news stories affect stigma-related attitudes, emotional reactions, and behavioral intentions towards students with a disability

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Students with intellectual or physical disabilities still face public and institutional stigmatization. The current study examines how different news portrayals of college students with a disability affect readers' stigma-related attitudes and behavioral intentions. A $2 \times 2 \times 2 \times 2$ full-factorial experiment was conducted, in which $N = 767$ respondents were presented a news article about a student with a disability. The article was manipulated regarding exemplar's type of disability, gender, socioeconomic status, and sexual orientation. All four tested exemplar characteristics and respondents' gender affected several dimensions of stigmatization, albeit often as interaction effects. Overall, findings indicate that story-unrelated characteristics of portrayed individuals affect readers' generalized stigma-relevant attitudes, emotional reactions, and behavioral intentions. Results are discussed regarding the likelihood for accidental stigmatization through journalistic exemplar choices, and regarding implications for a stigma-sensitive health communication and anti-stigma communication practice.

KEYWORDS

stigmatization, destigmatization, exemplification, disability, gender, intersectionality

1 Introduction

Mass media shape audiences' views on people with disabilities and other minority groups (Corrigan et al., 2013; Oliver et al., 2012). These perceptions are likely to affect public stigmatization towards such groups, resulting in adverse health consequence such as poorer overall health, increased likelihood of problematic health behavior (e.g., increased alcohol and drug use, increased suicidal tendencies), and delayed or more difficult access to medical treatment (e.g., Clement et al., 2015). News reports about social issues often portray affected individuals ("exemplars") in order to grab audiences' attention and to give stories a "human touch" (Zillmann and Brosius, 2000).

While such portrayals can vary greatly in terms of style and are typically not representative for the issue, research from framing and exemplification research suggests that they can change audiences' attitudes and reality perceptions (Krämer and Peter, 2020). It is largely unknown, however, to which extent such news portrayals of *single cases* affect audiences' generalized stigmatizing attitudes towards *all members* of the depicted group. Likewise, it is largely unclear which characteristics of the exemplars affect stigma-related outcomes, and how these exemplar characteristics interact with each other as well as with reader characteristics. The present study addresses these research gaps by examining the effects of experimentally manipulated news portrayals of college students with a disability on readers' emotional reactions, stigma-related attitudes, and behavioral intentions.

1.1 Exemplars and stigma-related attitudes

According to *exemplification theory* (Zillmann and Brosius, 2000), media exemplars (e.g., single-case portrayals) of a person are capable of altering recipients' issue perceptions and attitudes, primarily due to their concreteness, emotionality, and attention-grabbing nature (Zillmann, 2006). Even though exemplars (e.g., a description of a person with a disability) are, by nature, not representative of larger social groups (e.g., people with disabilities in general), they still represent the population in the coverage and are therefore expected to influence audiences' knowledge, feelings, attitudes, and behaviors (cf. representative heuristic, Kahneman and Tversky, 1972). Besides, individuals' tendency to prefer concrete, emotional (i.e., exemplar) information over statistical data when making judgments is well documented in the literature (de Wit et al., 2008; Uribe et al., 2013; Zillmann, 2006), and is also at the core of concepts such as the "base-rate fallacy" (Bar-Hillel, 1980) or the "vividness effect" (Collins et al., 1988). All in all, several theoretical frameworks and numerous studies suggest that single-case descriptions are influential for attitude formation, decision making, and behavior changes related to social issues (Zillmann and Brosius, 2000).

Mass media have long been criticized for stereotypical and negatively biased media presentations of people with mental health problems (Ma, 2017), intellectual disabilities (Wilkinson and McGill, 2009), and physical disabilities (Hebl and Kleck, 2000). However, previous studies suggest that even realistic representations can have unpredictable and negative effects on recipients' attitudes (Ritterfeld and Jin, 2006; Röhm et al., 2017). While it can be assumed that news reports can unintentionally increase or decrease stigmatization, the mechanisms are still not well understood. For example, there is a comparatively large number of studies on the influence of insinuated guilt or responsibility for a person's disability on stigmatization. These studies indicate that individuals who are perceived as responsible for their disability (e.g., through risky health behavior) elicit more stigmatization than individuals with disabilities that are associated with environmental or bio-genetic causes (e.g., Haslam and Kvaale, 2015; Röhm et al., 2022a,b). Our study is more concerned with aspects of exemplar portrayals that appear largely irrelevant to the news story, such as exemplars' demographic characteristics. Such

information is frequently mentioned in news stories, albeit often only as a side note. It is largely unclear if, or how, these additional information affects how readers think or feel about the social group that the portrayed exemplars represent. It is not yet known, for example, which combination of characteristics of individuals with a disability should be emphasized in news reports in order to reduce the possible stigmatization of this group, and which characteristics, or combination of characteristics, might unintentionally further increase audiences' stigmatizing tendencies. In order to assess the variety of stigma-related reactions, stigmatizing generalized attitudes are subsequently understood as encompassing specific dimensions of affect (e.g., reduced prosocial emotions), cognition (e.g., increase in ascribed functional limitations), and behavior (e.g., increased intentions for social distance or decreased positive behavioral intentions; cf. Breckler, 1984). The current study therefore attempts to clarify (1) which exemplar characteristics are relevant for stigma-related attitudinal, emotional and behavioral changes related to individuals with a disability, and (2) how exemplar characteristics interact with each other and with readers' gender in shaping stigma-related audience responses.

1.2 Stigma-relevant exemplar characteristics

Many aspects of individuals or their stories are potentially stigma-relevant. The current study focuses on four characteristics that are typically mentioned in news reports, and examines how they—individually or in specific combination—affect generalized attitudes towards all members of the portrayed group (i.e., individuals with a disability). Building on concepts such as priming (Molden, 2014), cue convergence (Cho et al., 2006), and labeling theory (Link and Phelan, 2001), the general presumption of our study is that even subtle cues (i.e., group labels) in news articles are sufficient to affect reader's stigma-related cognitive, emotional, and behavioral responses. While *priming* processes are defined as unintentional and unaware activations of emotions, opinions, and intentions by a stimulus (Molden, 2014), *cue convergence* extends this notion by considering possible interactive effects of multiple informational cues (e.g., multiple stigma-relevant group labels) in news stories, which affect audience's cognitive processing and attitude formations (Cho et al., 2006). *Labeling theory* refers to the formation of stigmatization via a social process in which "elements of labeling, stereotyping, separation, status loss and discrimination co-occur in a power situation that allows them to unfold" (Link and Phelan, 2001, p. 367). As set out in detail below, we assume that cues for the exemplar's type of disability, gender, socioeconomic status, and sexual orientation are, either alone or in combination, highly relevant in this regard.

1.2.1 Type of disability

Since Weiner et al. (1988) initial examination of stigma attributions, the dissimilar stigmatization of different types of disabilities is well documented (e.g., Barr and Bracchitta, 2015; Hernandez et al., 2000; Miller et al., 2009; Werner, 2015). Compared to physical disabilities, studies consistently indicate

a higher stigmatization of people with mental or intellectual disabilities, due to the common invisibility (Venville et al., 2016) and frequently attributed severity and uncontrollability of such conditions (Miller et al., 2009). Some scholars (e.g., Neuberg et al., 2000) argue that the stigmatization of disabilities depends on the extent that individuals are perceived as being able to contribute to a society: “As societies evolve and the most valued tasks shift from physical to cognitive, [...] physical disability becomes less stigmatized” (Scior, 2016; p. 6–7). We therefore assume that reading a news portrayal featuring an individual with a learning disability in an academic context evokes more stigmatizing reactions than reading the same news report featuring an exemplar with a physical disability:

H1: Reading a news report featuring an exemplar with a learning disability produces increased stigmatizing responses towards individuals with a disability, compared to reading a news report featuring an exemplar with a physical disability.

1.2.2 Gender

While ample research suggests that sexism and gender-based discrimination are still widespread, the scientific literature is inconclusive about the type of dominant bias (e.g., Connor et al., 2023; Ward and Grower, 2020), and also about the conditions in which such biases or prejudices would affect exemplar-related audience responses. Previous experimental research typically did not observe general stigma-related differences based on exemplars' gender, but instead for readers' gender: Compared to female readers, male readers frequently indicated generally higher levels of stigmatization after reading articles about individuals with an illness or a disability (e.g., Röhm et al., 2018, 2022c; Vilchinsky et al., 2010). Consequently, we refrain from positing an exemplar-gender-specific hypothesis, and instead focus on the interaction between readers' and exemplars' gender. Building on *social comparison theory* (Festinger, 1954) and *social identity theory* (Tajfel and Turner, 1986), we presume that in-group/out-group distinctions have an important influence on recipients' reactions towards exemplar portrayals of potentially stigmatized individuals (Chung and Slater, 2013; Crocker et al., 1998; Major and O'Brien, 2005). As Locke (2014) notes, “the information from a social comparison can influence your feelings, goals, and actions, as well as how you perceive and evaluate yourself and others” (p. 11). Accordingly, a person's gender can deem as a relevant category for social comparison processes, and may thus foster or inhibit stigmatization. Same-gender exemplar-reader constellations are particularly valuable for social comparison processes (e.g., Knobloch-Westerwick and Hastall, 2006), and exemplars of a different gender are likely perceived in a less favorable way (Festinger, 1954; Tajfel and Turner, 1986). We therefore assume that gender-congruent reader-exemplar constellations (in-group conditions) generally yield less stigmatization than gender-incongruent reader-exemplar constellations (out-group conditions):

H2: Compared to gender-incongruent reader-exemplar conditions, reading an article featuring an exemplar with the same gender as the reader evokes less generalized stigmatization towards individuals with a disability.

1.2.3 Socioeconomic status

An exemplars' socioeconomic status similarly provides readers with an opportunity for self-promoting downward (e.g., exemplar with a low socioeconomic status) or self-threatening upward-comparisons (e.g., exemplar with a high socioeconomic status). People seek *upward-comparisons* for self-improvement and motivation, but also tend to derogate and reject superior others (Parks-Stamm et al., 2008). When objective norms are absent, these processes can unfold almost independently from one's own actual attribute, since, for example, the mere depiction of a person as “athletic, intelligent, or attractive implies that this person is more athletic, more intelligent, and more attractive than others” (Corcoran et al., 2011; p. 122). Social *downward-comparisons*, in contrast, can boost readers' self-esteem (e.g., Zuckerman and O'Loughlin, 2006), but can also elicit prosocial emotions such as empathy towards individuals in a worse situation. In line with these and our aforementioned assumptions, we presume that cues of an exemplar's high socioeconomic status elicits self-threatening upward comparisons and, accordingly, produces more stigmatization than social downward comparisons (i.e., exemplars with a lower socioeconomic status):

H3: Exemplars with higher socioeconomic status evoke more generalized stigmatization towards individuals with a disability than exemplars with lower socioeconomic status.

1.2.4 Sexual orientation

Homosexual individuals still experience high levels of stigmatization (e.g., Herek, 2000, 2002; Ratcliff et al., 2006), which is rooted in public and individual prejudices towards sexual minorities (Herek, 2015). As a consequence, homosexual men, for instance, “experience heightened rates of mental and physical health problems compared to heterosexuals, including depression, suicidality, anxiety, and alcohol and substance abuse” (Israel et al., 2020, p. 1). Changing attitudes of a predominately heterosexual public towards homosexual individuals is challenging and still lacking evidence-based interventions (Tucker and Potocky-Tripodi, 2016). Based on the assumption of mainly heterosexual identifying audiences, we presume that the presentation of a homosexual exemplar in a news article evokes more stigmatizing responses towards people with a disability than the depiction of a heterosexual exemplar:

H4: Homosexual exemplars evoke more generalized stigmatization towards individuals with a disability than heterosexual exemplars.

Research also indicates that stigmatization towards homosexual individuals is highly gender-specific. Ratcliff et al. (2006), for example, observed that female heterosexuals reported less prejudice towards gay men than male heterosexuals, because female respondents showed a higher internal motivation to respond without prejudice. In the case of attitudes towards lesbians, the studies indicate a similar but weaker pattern (Herek, 2002; Ratcliff et al., 2006). Hence, we expect that the stigmatization of a homosexual exemplar with a disability is moderated by (a) the readers' gender and also (b) the gender of the depicted exemplar:

H5a: The effect of an exemplar's sexual orientation on readers' generalized stigmatization towards individuals with a disability is

moderated by the *readers' gender*, resulting in higher stigmatization towards homosexual exemplars from male readers than from female readers.

H5b: The effect of an exemplar's sexual orientation on readers' generalized stigmatization towards individuals with a disability is moderated by the *exemplars' gender*, resulting in higher stigmatization towards homosexual male exemplars than towards homosexual female exemplars.

1.3 Cumulative effects of stigma-relevant exemplar characteristics

Crenshaw (1989) proposed the *intersectionality hypothesis* as a conceptual framework to address the multi-layered discrimination of black women in the United States. This view emphasizes the interaction of various factors that jointly contribute to a persons' individual discrimination experience (e.g., sex, race, poverty, and disability). This perspective receives increasing attention in stigma research (cf. Else-Quest, 2023). For example, Chadoir (2023) observed that in individuals with one or more stigmatized identities, the "number of stigmas was linked to greater symptoms of mental and physical illness" (p. 360), depending on stigma-related cultural conditions. Regarding the stigmatization of people with disabilities, a *cumulative effect* can be presumed, as multiple stigmata are likely to produce different reaction pattern including higher levels of stigmatization than a singular stigma.

H6: Exemplars with multiple stigmata (e.g., homosexual exemplars with a learning disability) produce more generalized stigmatizing responses towards individuals with a disability than single-stigma exemplars.

2 Method

2.1 Overview

A $2 \times 2 \times 2 \times 2$ full-factorial experiment was conducted in which respondents read a news article describing a student with a disability before completing a paper-and-pencil questionnaire. Four characteristics of the portrayed student (exemplar) were experimentally manipulated: His or her *type of disability* (physical disability vs. mild learning disability), *gender* (male vs. female), *socioeconomic status* (high vs. low), and *sexual orientation* (homosexual vs. heterosexual). Participants were randomly assigned to one of the resulting 16 experimental conditions.

2.2 Procedure

Respondents were recruited in large university lectures from different course programs. A paper-and-pencil questionnaire, which included one of the manipulated article versions, was handed to each participant. After participants read the assigned article, stigma-related attitudes, social distance, and positive behavioral intentions towards people with a disability were assessed through self-report scales as primary dependent measures, as well as sociodemographic data (e.g., respondents' gender and age).

After finishing the questionnaire, participants were debriefed and thanked for participation.

2.3 Stimulus material and experimental manipulations

A three-column news article functioned as stimulus material (see Figure 1). It depicted a student with a disability who just joined the participants' university, and described the initial experiences and challenges. Four exemplar characteristics, which are described in more detail below, were experimentally manipulated throughout the text by only changing specific cue words or a few sentences, while the rest of the article text was kept constant. Supplementary Table S1 contains an English translation of the stimulus article, in which experimentally manipulated words and sections are highlighted.

2.3.1 Type of disability

The portrayed student was labeled and briefly described as either a wheelchair user or as having a mild learning disability. Both descriptions only encompassed a few disability-related difficulties and symptoms. Depending on the type of disability, he or she had to face some typical challenges such as barriers when visiting the university canteen (wheelchair user) or not being able to read and calculate as fast as the fellow students (mild learning disability). Despite his or her physical or cognitive limitations, the student was portrayed as being able to keep up with his or her studies, and as having sufficient social support through parents and friends. This manipulation was only present in specific sections of the text to avoid confounding with other exemplar cues or with the general story of the article, for which the type of disability was largely irrelevant.

2.3.2 Exemplar's gender

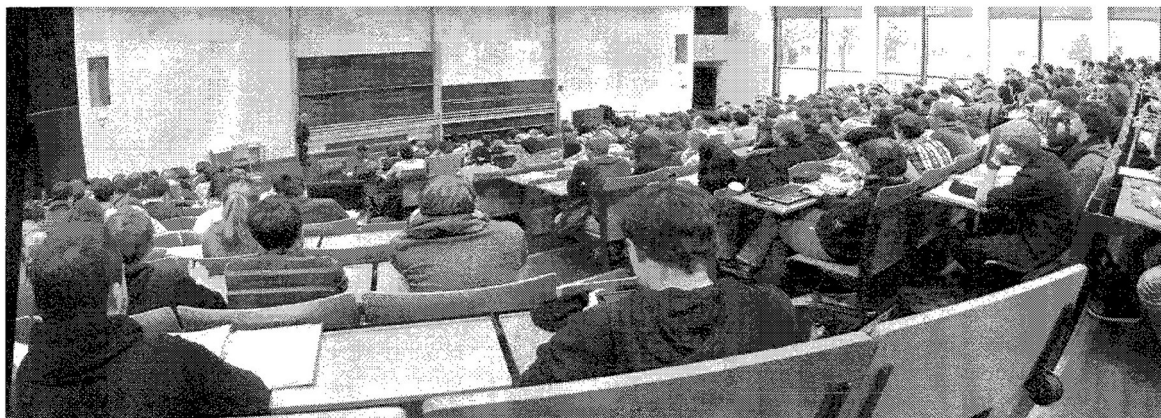
The exemplar's gender was manipulated by changing the name of the portrayed person (Konstantin vs. Franziska) as well gender-specific expressions.

2.3.3 Socioeconomic status

With regard to the parental support, the article indicated that the portrayed student came from either a rich or a poor family. Accordingly, parents could either support their daughter or son emotionally and financially (rich parental home), or just emotionally (poor parental home).

2.3.4 Sexual orientation

One paragraph briefly referred to the exemplar's sexual orientation. It was mentioned that the exemplar and her or his girlfriend or boyfriend are moving into a new apartment together, with the partner's name (Tom vs. Mia) indicating the type of relationship and the parents stating their agreement with this "relationship" or "homosexual relationship," respectively.



Vertrautes Bild? Ein voller Hörsaal an der TU Dortmund zu Beginn des Wintersemesters 2014/2015. Foto: Dieter Menne.

Neuer Rekord: Fast 33.000 Studenten an der TU Dortmund

Mehr Vielfalt an der Uni: Einblicke in das Leben einer lernbehinderten Studienanfängerin

Von Katharina Kaiser

Die Zahl der Studienanfänger in NRW erhöht sich weiter. Die TU Dortmund zählt im Wintersemester bereits 32.801 Studierende, vor zehn Jahren waren es noch 10.000 weniger. Dies liegt an der Abschaffung der Studiengebühren, aber auch am Abbau von Barrieren für Menschen mit Behinderung. Dadurch ist das Studium für viele junge Leute erstmals überhaupt zur Option geworden.

Eine von ihnen ist Franziska Pohl. Die 20-jährige Dortmunderin studiert seit Oktober Wirtschaftswissenschaften an der TU Dortmund. Franziska hat eine leichte Lernbehinderung. Das bedeutet, dass sie Schwierigkeiten hat, schnell neue Inhalte zu erfassen. Auch beim Lesen und Rechnen ist sie meist deutlich langsamer als ihre Kommilitonen.

Studium trotz kognitiver Einschränkungen

Frühzeitig schon hat Franziska gelernt, mit ihrer Beeinträchtigung

umzugehen. „Für mich war meine Behinderung nie so ein großes Problem. Jeder hat seine Stärken und Schwächen. Und bei richtiger Planung und Vorbereitung kann ich eigentlich ganz gut mit meinen Kommilitonen mithalten.“ sagt Franziska selbstbewusst über sich.

Ihre Eltern haben sie bei der Verwirklichung ihrer Träume und Wünsche so gut wie möglich unterstützt. Franziska kommt aus einem vergleichsweise armen Elternhaus, ihre Eltern waren eher eine emotionale als eine finanzielle Stütze.

Einfluss des sozialen Status: Armes Elternhaus als Nachteil

Nach ihrem Abschluss plant Franziska in einem großen Unternehmen zu arbeiten. Doch zunächst setzt sie sich kleinere Ziele. Sie träumt davon, in den Semesterferien mit ihrem langjährigen Partner Tom zusammenzuziehen. Auch er hat im Oktober sein Studium an der TU Dortmund begonnen. Bei der

Finanzierung der Wohnung können Franziskas Eltern das Pärchen nicht unterstützen, freuen sich aber sehr über diesen Schritt ihrer Tochter. Mit der Beziehung zu Tom haben sie kein Problem.

„Für mich war meine Behinderung nie ein Problem“

Franziska möchte sich gar nicht vorstellen, wie vielen Menschen ein Studium aufgrund unterschiedlicher Hindernisse verwehrt worden ist. Sie und ihr Partner Tom genießen das Studentenleben und lernen fast täglich neue Kommilitonen kennen.

„Uns ist völlig egal, ob jemand behindert ist oder nicht oder welche sexuelle Orientierung jemand hat. Wir sind doch letztlich alle hier, um eine möglichst erfolgreiche und angenehme Zeit an der Uni zu haben“, sagt die 20-Jährige.

Franziska ist mit ihrer Lernbehinderung nur ein Beispiel für viele Studienanfänger an Universitäten, denen trotz körperlicher oder kognitiver Einschränkungen ein Studium möglich ist.

Die Zahl der Studienanfänger wird weiterhin steigen, und Universitäten bauen stetig Barrieren ab, sodass in Zukunft immer mehr junge Leute mit Behinderung Zugang zur Hochschulbildung erhalten und ihren Weg in die Hörsäle finden werden.

FIGURE 1

Example of stimulus material (manipulations: type of disability: mild learning disability; sex: female; socio-economic status: low; sexual orientation: heterosexual); Image Source: Dieter Menne/TU Dortmund University.

2.4 Stimulus check

In a pretest, $N = 33$ participants (53.02% female; age: $M = 25.6$ years, $SD = 4.91$) rated two versions of the stimulus articles which covered all possible variations of the stimulus manipulations. Those were unanimously recognized (Krippendorff's alpha: type of disability = 1.00; exemplar's gender = 1.00; socioeconomic status = 1.00; sexual orientation = 1.00), which confirmed the successful manipulation of all experimental conditions. The 16 variations of the stimulus article did not differ regarding length ($M = 448$ words, $SD = 2.48$; $X^2 = 0.21$, $df = 15$, $p = 1.00$) or tone, since changes were only applied to the experimental cues described above, while the rest of the article text was kept constant (see also [Supplementary Table S1](#)).

2.5 Sample

Participants were $N = 767$ university students from TU Dortmund University, which were recruited from different course programs. Mean age was $M = 21.32$ years ($SD = 2.93$), 53.3% of respondents were female (1% did not indicate their gender).

2.6 Dependent measures

To assess a broad range of relevant stigma-related reactions that encompass both stigmatizing as well as destigmatizing responses, six dimensions were assessed: (1) prosocial emotional reactions, (2) discomfort and insecurity, (3) imputed functional limitations, (4) ascribed emotional maladjustment, (5) social distance, and (6) positive behavioral intentions. These dependent measures reflect a variety of important affective, cognitive, and behavioral attitudinal dimensions related to stigma (cf. [Breckler, 1984](#)).

2.6.1 Prosocial emotional reactions

Prosocial emotional reactions were measured using two items from [Schomerus et al.'s \(2013\) emotional reactions scale](#). Participants indicated their level of agreement to the statements "I feel sympathy" and "I feel the need to help" on a five-point Likert scale (1 = "does not apply at all"; 5 = "fully applies"; $r = 0.59$).

2.6.2 Stigma-related attitudes

Attitudes towards people with disability were measured using the subscales *discomfort and insecurity* (15 items; Cronbach's alpha = 0.86), *imputed functional limitations* (eight items; Cronbach's alpha = 0.80), and *ascribed emotional maladjustment* (seven items; Cronbach's alpha = 0.79) from [Seifert and Bergmann's \(1983\) German translation of the attitudes towards disabled persons scale \(ATDP; Yuker, 1970\)](#). Participants indicated their agreement or disagreement with statements such as "It is difficult to behave correctly towards a person with a disability" (discomfort and insecurity), "People with disabilities are usually only able to perform less qualified occupational activities" (imputed functional limitations), or "People with disabilities tend to pity themselves"

(ascribed emotional maladjustment) on a five-point Likert scale (1 = "do not agree at all"; 5 = "fully agree").

2.6.3 Social distance

Social distancing behavior was assessed using a German seven-item social distance scale ([Angermeyer and Matschinger, 1995](#)). Respondents were asked to indicate their level of agreement or disagreement with behaviors in fictional situations (e.g., acceptance of a person with the portrayed disability as subtenant) on a five-point Likert scale (1 = "in any case," 5 = "in no case at all"). Cronbach's alpha = 0.84 indicates sufficient internal consistency.

2.6.4 Positive behavioral intentions

Positive behavioral intentions were measured using a German translation ([Röhm, 2017](#)) of the four-item version of the reported and intentional behavior scale (RIBS; [Evans-Lacko et al., 2011](#)). These items assessed respondents' willingness to live with, to work with, to live nearby, and to continue a relation with a person who has the disability portrayed in the article (five-point Likert scale with 1 = "do not agree at all," 5 = "fully agree"; Cronbach's alpha = 0.83). A high RIBS score indicates positive behavioral intentions and therefore suggests low stigmatization tendencies.

[Table 1](#) shows means, standard deviations, and intercorrelations of all six dependent measures.

2.7 Data analyses

Data analyses were conducted using IBM SPSS version 26. Only completely answered questionnaires were included in the analysis. All experimental conditions were dummy-coded as independent variables, and mean scores were calculated for all dependent measures. All hypotheses were tested by a multivariate analyses of variance (MANOVA) with all four experimental exemplar manipulations (1. type of disability; 2. gender; 3. socioeconomic status; 4. sexual orientation) and respondents' gender as factors for all six dependent variables (prosocial emotional reactions, discomfort and insecurity, imputed functional limitations, ascribed emotional maladjustment, social distance, and positive behavioral intentions). To protect subsequent ANOVAs against type I errors, only MANOVA effects with $p < 0.05$ are reported below ([Field, 2018](#)). The significance of differences between the estimated marginal means was determined through Sidak-corrected simple effect post-hoc tests, which compare all pairs of levels for one factor for each level of all other factors.

3 Results

[Table 2](#) shows all significant main effects and higher order interactions from the MANOVA using Pillai's trace. Significant main effects and higher order interactions

TABLE 1 Means, standard deviations, and intercorrelations of all dependent variables.

		<i>M</i>	<i>SD</i>	(2)	(3)	(4)	(5)	(6)
(1)	Prosocial Emotional Reactions	2.90	1.02	-0.24**	-0.21**	-0.17**	-0.29**	0.26**
(2)	Discomfort and Insecurity	2.14	0.62		0.71**	0.64**	0.67**	-0.60**
(3)	Imputed Functional Limitations	2.36	0.65			0.64**	0.56**	-0.49**
(4)	Ascribed Emotional Maladjustment	1.91	0.59				0.50**	-0.46**
(5)	Social Distance	1.92	0.68					-0.78**
(6)	Positive Behavioral Intentions	4.12	0.77					

** $p < 0.01$.

TABLE 2 Significant main effects and higher order interactions from the MANOVA with all four experimental article manipulations and respondents' gender as factors using Pillai's trace.

	<i>V</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
Main effects					
Respondents' Gender	0.158	22.118	6	708	<0.001
Type of Disability	0.023	2.722	6	708	0.013
Sexual Orientation	0.020	2.427	6	708	0.025
Higher-order interactions					
Type of Disability × Exemplars' Gender	0.019	2.266	6	708	<0.01
Type of Disability × Sexual Orientation × Respondents' Gender	0.024	2.850	6	708	<0.01
Type of Disability × Exemplars' Gender × Socioeconomic Status × Sexual Orientation	0.021	2.544	6	708	0.019

Prosocial emotional reactions, discomfort and insecurity, imputed functional limitations, ascribed emotional maladjustment, social distance, and positive behavioral intentions were included as dependent variables.

($p < 0.05$), which emerged from the subsequent ANOVAs, are reported below.

3.1 Main effects of respondents' gender

A main effect of respondents' gender emerged for all six dependent measures [social distance: $F_{(1,713)} = 28.685, p < 0.001, \eta^2 = 0.004$; positive behavioral intentions: $F_{(1,713)} = 43.479, p < 0.001, \eta^2 = 0.002$; discomfort and insecurity: $F_{(1,713)} = 58.549, p < 0.001, \eta^2 = 0.006$; imputed functional limitations: $F_{(1,713)} = 33.755, p < 0.001, \eta^2 = 0.003$; ascribed emotional maladjustment: $F_{(1,713)} = 37.789, p < 0.001, \eta^2 = 0.004$; prosocial emotional reactions: $F_{(1,713)} = 80.782, p < 0.001, \eta^2 = 0.011$]. Compared to male participants, female respondents reported significantly less social distance and stigmatizing attitudes as well as more prosocial emotions and positive behavioral intentions towards persons with disabilities, independent of the respective exemplar manipulations (Figure 2).

3.2 Main effects of experimental article manipulations

A main effect of exemplars' type of disability was found for prosocial emotional reactions, $F_{(1,713)} = 6.212, p = 0.013, \eta^2 = 0.001$, discomfort and insecurity, $F_{(1,713)} = 7.505, p < 0.01, \eta^2 = 0.001$, and social distance, $F_{(1,713)} = 6.644, p = 0.01, \eta^2 = 0.001$. Sidak-corrected simple effect post-hoc comparisons indicate that respondents stated significantly less prosocial emotions and more social distance as well as more discomfort and insecurity after reading an article that featured an exemplar with a learning disability in comparison to an exemplar with a physical disability (see Figure 3). This finding is in line with hypothesis 1. However, due to the hybrid interaction of type of disability with exemplars' gender on discomfort and insecurity (see below), this main effect should not be interpreted globally (cf. Field, 2018).

A main effect of sexual orientation was only found for prosocial emotional reactions, $F_{(1,713)} = 11.599, p < 0.01, \eta^2 = 0.002$. Participants reported significantly more prosocial emotions towards a heterosexual exemplar than towards a homosexual exemplar, indicating partial support for hypothesis 4 (Figure 4).

3.3 Higher-order interactions

A type of disability × exemplars' gender two-way interaction became significant for discomfort and insecurity, $F_{(1,713)} = 8.248, p < 0.01, \eta^2 = 0.001$, and ascribed functional limitations, $F_{(1,713)} = 7.473, p < 0.01, \eta^2 = 0.001$. Sidak-corrected simple effect post-hoc comparisons indicate that respondents reported significantly higher stigmatization after reading an article featuring a male exemplar with a learning disability than a male exemplar with a physical disability (Figure 5). Female exemplars with a learning disability evoked less discomfort and insecurity than male exemplars with the same disability. Conversely, depictions of female exemplars with a physical disability yielded higher presumed functional limitations than depictions of male exemplars with a physical disability. This specific interaction between exemplars' gender and disability type was not predicted in any of our hypothesis. The first interaction related to the dependent variable discomfort and insecurity, however, restricts the generalizability of the "exemplar disability type" effect postulated in hypothesis 1.

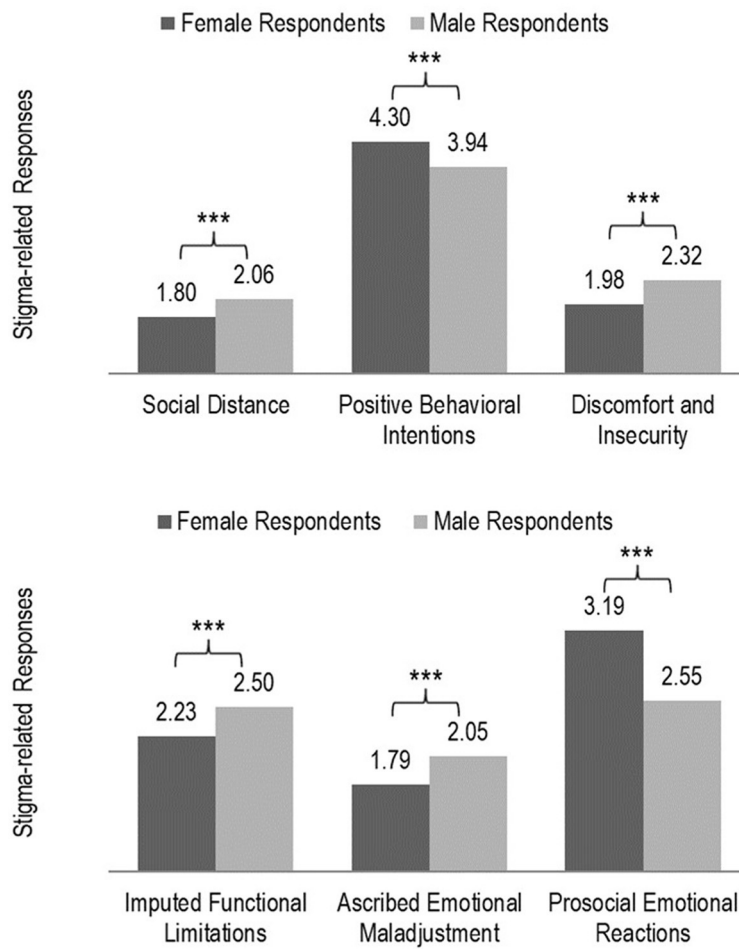


FIGURE 2
 Estimated marginal means for the main effect of respondents' gender on all six dependent stigma-related measures (Sidak-corrected simple effect post-hoc comparisons; *** $p < 0.001$).

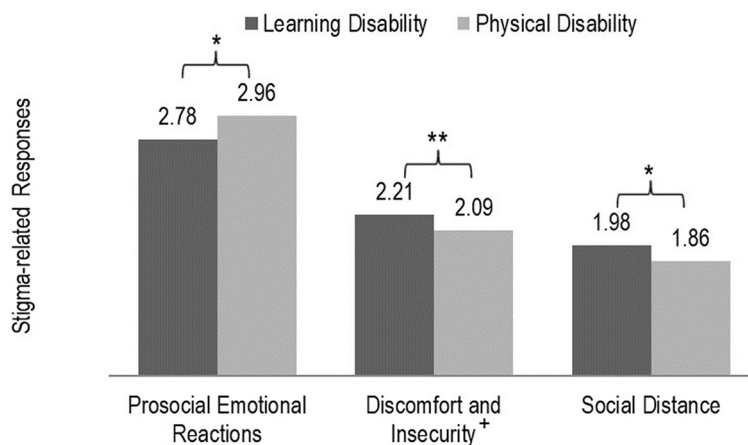


FIGURE 3
 Estimated marginal means for the main effect of the exemplars' disability type manipulation on prosocial emotional reactions, discomfort and insecurity, and social distance (Sidak-corrected simple effect post-hoc comparisons; ** $p < 0.01$; * $p < 0.05$). ⁺ Due to the hybrid interaction of exemplars' type of disability with exemplars' gender on discomfort and insecurity (see Figure 5), this main effect should not be interpreted globally.

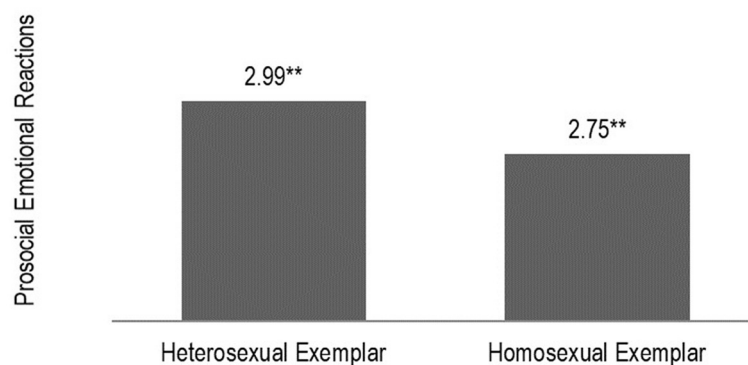


FIGURE 4 Estimated marginal means for the main effect of the exemplars' sexual orientation manipulation on prosocial emotional reactions (Sidak-corrected simple effect post-hoc comparisons; ** $p < 0.01$).

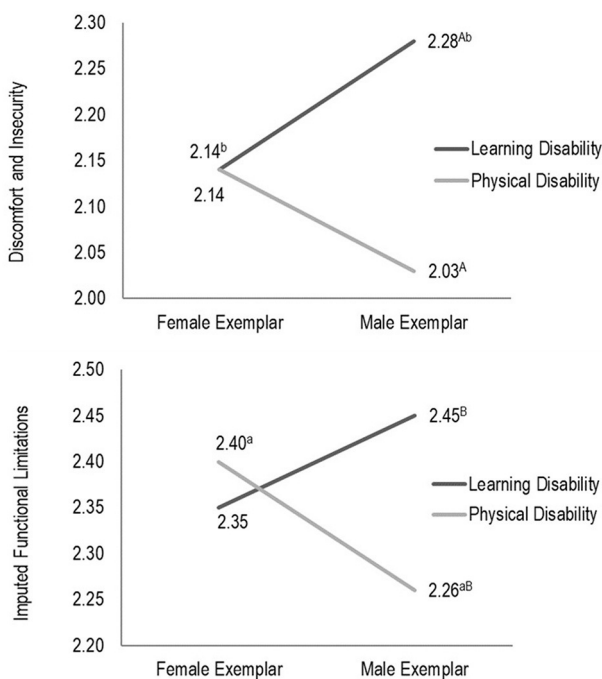


FIGURE 5 Estimated marginal means for the disability type \times exemplar's gender two-way interaction on discomfort and insecurity and imputed functional limitations. Means sharing the same capital letter differ significantly at $p < 0.01$, means sharing the same small letter differ significantly at $p < 0.05$ (Sidak-corrected simple effect post-hoc comparisons).

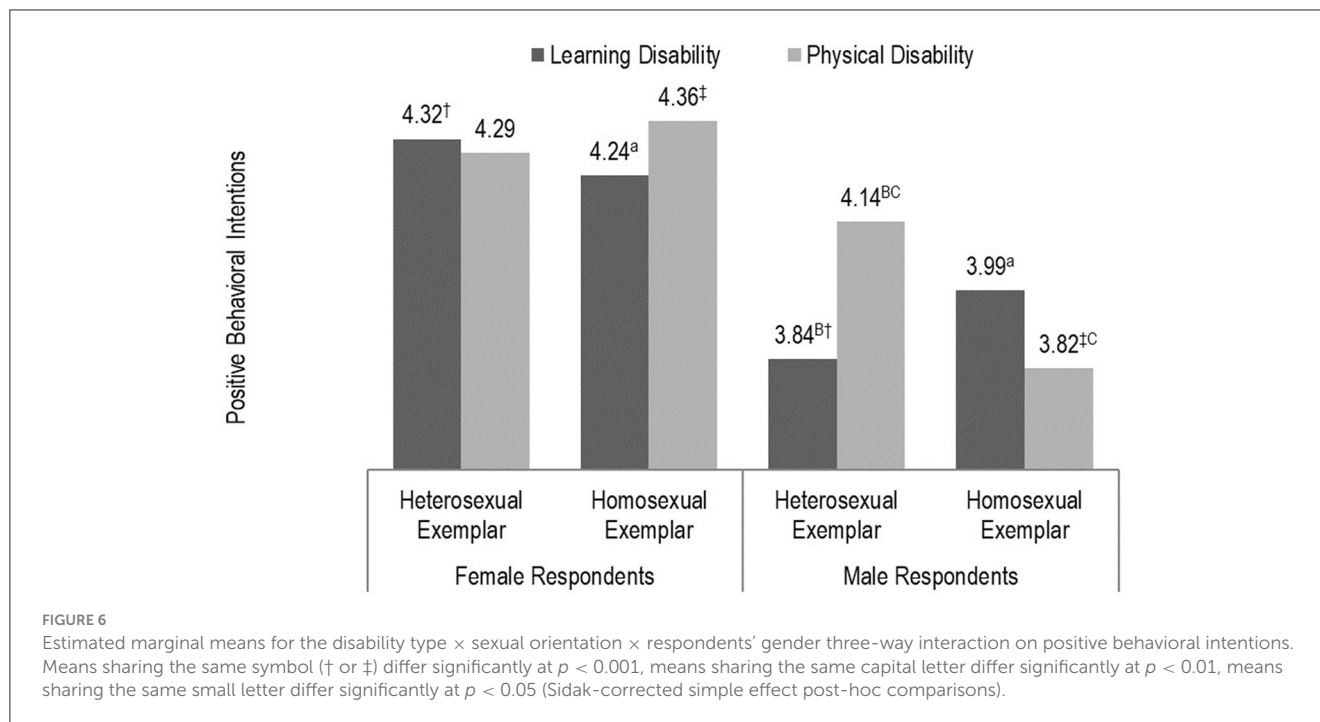
A type of disability \times sexual orientation \times respondents' gender three-way interaction emerged for positive behavioral intentions, $F_{(1,713)} = 8.066, p < 0.01, \eta^2 < 0.001$. As shown in Figure 6, female respondents indicated comparatively similar and high levels of positive behavioral intentions towards individuals with a disability, independent of the exemplar's type of disability and sexual orientation. Male respondents, in contrast, indicated significant lower positive behavioral intentions, except if the article featured

a heterosexual exemplar with a physical disability, in which case the difference to female respondents did not become significant. Besides, heterosexual exemplars with a learning disability and homosexual exemplars with a physical disability yielded less positive behavioral intentions for male respondents than the just mentioned heterosexual exemplars with a physical disability.

Finally, a type of disability \times exemplars' gender \times socioeconomic status \times sexual orientation four-way interaction emerged for social distance, $F_{(1,713)} = 4.328, p = 0.038, \eta^2 = 0.001$, and positive behavioral intentions, $F_{(1,713)} = 4.835, p = 0.028, \eta^2 < 0.001$. Sidak-corrected simple effect post-hoc comparisons indicate that respondents showed higher social distance and lower positive behavioral intentions, hence more stigmatization, after reading an article that featured a male heterosexual exemplar with a learning (in contrast to a physical) disability (see Figure 7). Female homosexual exemplars with a learning disability and rich parents provoked more positive behavioral intentions, and likewise less social distance, than male exemplars with the same disability type, sexual orientation, and financial status. Lastly, male heterosexual exemplars with a learning disability and poor parents yielded less stigmatization than female exemplars with the same disability, sexual orientation, and financial status.

3.4 Summary

To summarize, our findings replicate the regularly observed gender difference that male study participants indicate higher levels of stigmatizing responses than female respondents. We found support for hypothesis 1 (higher stigmatization of exemplars with a learning disability) and hypothesis 4 (higher stigmatization of homosexual exemplars), which, however, were either limited by hybrid higher-order interactions (hypothesis 1) or only emerged for one dependent measure, prosocial emotional reactions (hypothesis 4). Since no two-way interaction between readers' and exemplars' gender became significant for any dependent measure, no evidence was found for gender-congruent or gender-incongruent stigmatization effects. Hypothesis 2 was thus not confirmed. Also, no direct support for hypothesis 3 emerged, as



exemplars with a high socioeconomic status did not generally yield more stigmatizing responses. Since most interaction effects involving exemplar's sexual orientation and either readers' gender or exemplars' gender emerged as higher-order interactions with other factors, there was also no clear support for hypotheses 5a and 5b. Yet, our findings hint to the notion derived from [Crenshaw's \(1989\)](#) intersectionality hypothesis that a combination of two or more stigma-relevant exemplar characteristics can yield increased stigmatizing reactions compared to a single stigma, leading to a partial support for hypothesis 6.

4 Discussion

Individuals with a disability still experience substantial public and structural stigmatization, which can have detrimental effects on their state of health and their engagement with health services or health care providers. At the same time, disability-related and inclusion-related topics are important aspects of public health communication, and are regularly addressed in news media. Mass media portrayals of affected individuals (i.e., exemplars) can—accidentally as well as intentionally—both increase and reduce readers' stigmatization towards members of the portrayed social group. The current study examined in detail which exemplar characteristics affect which stigma-related generalized reader attitudes towards all individuals with a disability, which role readers' gender plays in this regard, and how these factors interact with each other. As still very little is known yet about the complexity of stigma-related changes in recipients' attitudes, emotional reactions, and behavioral intentions, we hoped to uncover those characteristics, or combinations of characteristics, that contribute to unintended stigmatization—or destigmatization—through news consumption.

In line with exemplification theory ([Zillmann and Brosius, 2000](#)), our results suggest that news reports about a single, non-representative individual in fact influence readers generalized attitudes, emotional responses, and behavioral intentions towards all individuals with a disability. All four examined exemplar characteristics (type of disability, gender, sexual orientation, and socioeconomic status) affected several dimensions of stigmatization, suggesting that many exemplar characteristics—even some that are irrelevant to a news story—may affect readers' stigma-relevant responses. Yet, many effects emerged as moderation effects, indicating that the investigated factors can interact in complex ways that are not necessarily easy to anticipate or intuitively comprehensible.

Hypothesis 1 postulated a higher generalized stigmatization response after reading an article featuring an exemplar with a learning disability (compared to a physical disability). This assumption of disability type-specific exemplar effects is supported by our results.

Yet, the observed effects of the exemplars' disability type depended, at least to some extent, on the exemplars' gender and the participants' gender. Independent of readers' gender, male exemplars produced more stigmatizing attitudes on two dependent variables (imputed functional limitations, discomfort and insecurity) if they were portrayed as having a learning (compared to a physical) disability, while the type of disability was irrelevant for female exemplars ([Figure 5](#)). This difference between both disability types appears to be particularly pronounced when male, heterosexual exemplars with poor parents were portrayed ([Figure 7](#)). Overall, depictions of male exemplars produce the highest variance in stigma-related responses with regard to the disability type, whereas female exemplars appear to yield somewhat more consistent reactions. Interestingly, a similar pattern emerged for readers' gender on the dependent variable positive behavioral

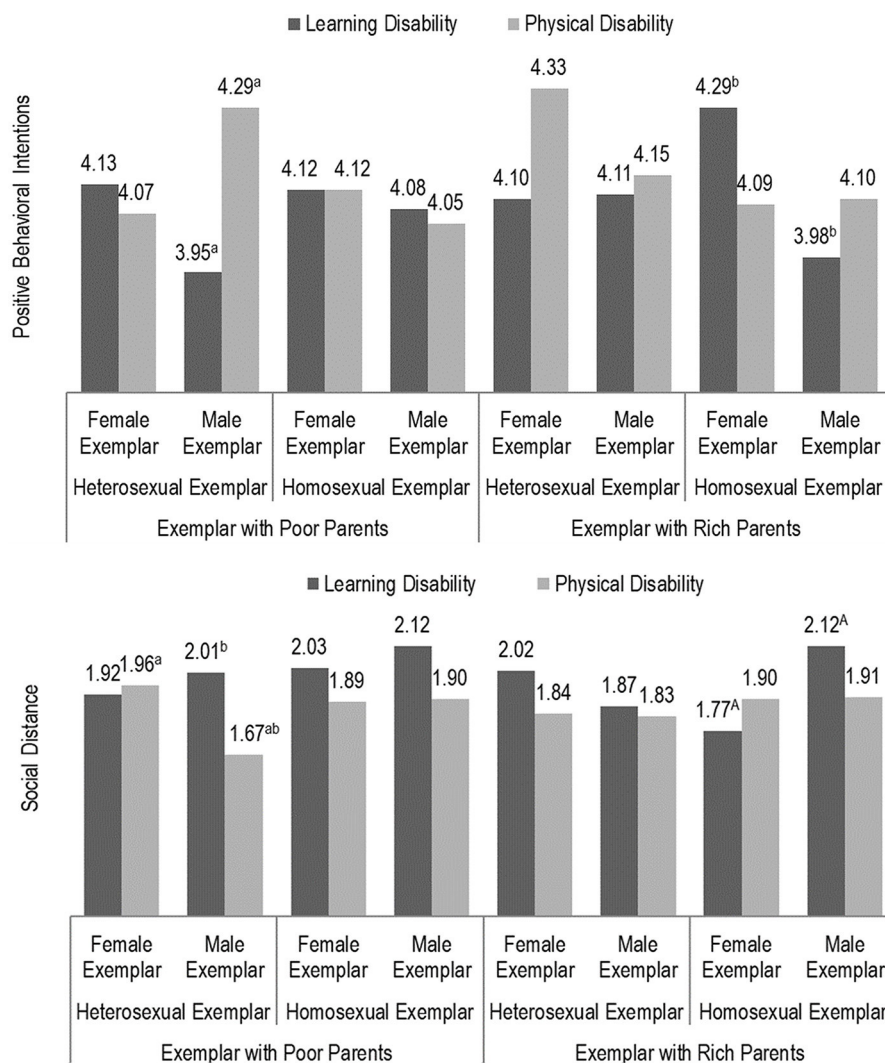


FIGURE 7 Estimated marginal means for the disability type × exemplar’s gender × socioeconomic status × sexual orientation four-way interaction on positive behavioral intentions and social distance. Means sharing the same capital letter differ significantly at $p < 0.01$, means sharing the same small letter differ significantly at $p < 0.05$ (Sidak-corrected simple effect post-hoc comparisons).

intentions (Figure 6). Male respondents’ answers differed greatly depending on the exemplars’ type of disability and sexual orientation, whereas women’s answers were not affected by these manipulations and also generally less stigmatizing. Taken together, it seems that particularly male exemplars should be used more cautiously and in a reflected manner, in both journalism and anti-stigma communication, as they may produce a larger variance of positive as well as negative responses. Likewise, male audiences can be expected to react more divergent, and also likely more stigmatizing, than female audiences after reading an article about an exemplar with a disability. We did not observe an interaction effect between readers’ gender and exemplars’ gender, indicating that both phenomena of greater male-variance exist largely independently of each other and thus deserve separate consideration. All in all, our findings support the notion that stigmatization is, to a large extent, a gender-specific phenomenon (e.g., Marini et al., 2013; Morin et al., 2013).

Our assumption derived from social identity theory (Tajfel and Turner, 1986), according to which certain exemplar characteristics should affect in-group/out-group distinctions and therefore also stigmatization, was not fully supported. No conclusive evidence was found for hypothesis 2, which predicted that same-gender reader-exemplar constellations (compared to gender-incongruent pairings) yield fewer stigmatizing responses. It is possible that stigmatization processes are influenced by different co-occurring processes that can reinforce or weaken each other. For example, while a certain tendency to stigmatize out-group members more than in-group members can be generally expected, it is also not unlikely that disreputable in-group members are more negatively judged than comparable out-group individuals (“black sheep effect”; Marques and Paez, 1994). Such an understanding of parallel and possibly opposing processes could explain some of our hypothesis-inconsistent findings.

The socioeconomic status of the portrayals also did not directly affect stigma-related outcomes, disproving hypothesis 3. Exemplars with a high socioeconomic status did not consistently evoke more stigmatization. Indeed, from a resource-oriented perspective could be argued that exemplars with limited financial means may be perceived as potentially threatening, as these individuals may require extra resources, and are thus judged more negatively. It is not unlikely that both paths of influence, the one we originally proposed and the resource-oriented alternative view just described, again occur in parallel.

The presumed higher stigmatization of homosexual (compared to heterosexual) individuals with a disability emerged as main effect for prosocial emotional reactions. While this finding is in line with hypothesis 4, it is noteworthy that the exemplars' sexual orientation did not directly affect other dependent measures such as social distance or positive behavioral intentions. However, we observed interactions of the exemplars' sexual orientation with respondents' gender and exemplar's gender, which emerged as three-way (respondents' gender; Figure 6) and four-way (exemplars' gender; Figure 7) interaction effects. Even though our assumption that readers' gender (hypothesis 5a) as well as exemplar's gender (hypothesis 5b) moderate the effects of exemplars' sexual orientation on stigma-related responses, the observed pattern is considerably more complex than expected and not consistent with our prediction. In fact, the simple effect *post-hoc* comparisons depicted in Figure 6 indicate only one significant difference produced by our sexual orientation manipulation: Reading an article featuring a heterosexual (compared to a homosexual) exemplar yields more positive behavioral intentions only for male readers, and only if the depicted exemplar has a physical disability (Figure 6). In line with research on gender-specific stigmatization of homosexual individuals (e.g., Herek, 2002; Ratcliff et al., 2006), our findings emphasize that individuals with a disability are not only subjected to stigmatization because of their disability, but also because of their sexual orientation.

Finally, the aforementioned complex interaction effects overall confirm hypothesis 6, which predicted a cumulative effect of stigma-relevant exemplar characteristics. Although this finding appears generally in line with Crenshaw's (1989) intersectionality hypothesis, the interaction patterns are complex and occasionally inconsistent and counter-intuitive, and therefore deserve further investigation in future studies.

4.1 Limitations

The current study utilized self-report measures for stigmatization, which are susceptible to social desirability biases. To account for such limitations, future studies should employ additional measures to control or diminish social desirability biases in stigma-related responses (cf. Henderson et al., 2012; Michaels and Corrigan, 2013). The exemplar manipulations were relatively subtle, only a few words were changed in most cases. This subtlety was intended, as we aimed to examine the impact of seemingly story-irrelevant or minor changes in exemplar depictions on readers' stigma-related responses. These small differences resulted in relatively low effect sizes of the exemplar

manipulations, which are substantially lower than effect sizes for participants' gender. Yet, also small effects can accumulate over time, and the individual and social consequences can be substantial. Future studies should therefore examine long-term effects of exemplar portrayals, to better understand if stigma-related exemplar effects are short-lived or cumulative, and thus growing through repeated exposure (e.g., Diefenbach and West, 2007). Furthermore, our experimental design did not include a control group (i.e., an experimental condition without stimulus exposure), which should be considered for upcoming studies. Future studies should also aim to replicate the effects observed in our study, but also test less subtle and further exemplar manipulations, also with regard to further aspects of social identities that have been studied in intersectionality research (e.g., ethnicity, class, religion, or age). It should be noted that the simple effect tests used in our study do not test all estimated marginal means against each other, which would require extensive significance level adjustments due to the large number of comparisons, and consequently severely increase the probability of type II errors (Field, 2018). Thus, it may be possible that this procedure missed relevant differences that were not covered by our statistical approach. We also did not assess respondents' sexual orientation and socioeconomic status, and were therefore unable to create in-group/out-group distinctions based on these aspects. Although we treated stigmatization as a multidimensional construct and assessed six distinct dimensions, other measurement approaches might produce different results. It is also not clear to what extent our findings are culture-specific, or how they would differ if a non-student sample was used. For example, Yang et al. (2014) highlight the relevance of culture for stigma research and the under-researched concepts of stigma in non-Western societies. Implications from the present study should not be generalized to other cultural contexts and need to be tested in other, particularly non-Western contexts. Finally, our study design did not differentiate between gender and sex. While gender as often understood as a social construct that primarily affects a person's attitudes and behaviors, sex is acknowledged as a biological compound that primarily affects a person's physiology and hormonal balance (cf. Mauvais-Jarvis et al., 2020). Future research should examine the extent to which both, readers' and exemplars' gender and sex, independently or jointly influence exemplar-induced stigmatizing responses towards individuals with a disability.

4.2 Implications

Given the prevalence of stigmatization processes and the likelihood that news reports accidentally increase and decrease discrimination through exemplar choices or exemplar descriptions on a daily basis, it seems vital to better understand the possible links between exemplification and stigmatization, also for other stigmatized groups. Our results indicate that even subtle and seemingly story-irrelevant changes in single-case descriptions influence recipients' stigma-related attitudes, emotions, and behavioral intentions towards all individuals of the portrayed group (e.g., people with a disability). As exemplars are frequently used in journalism, health communication, anti-stigma communication,

and several other practice areas, it seems crucial to better understand unintended negative effects of specific exemplar depictions, but also their potential to reduce stigmatization. More research is needed to better understand which exemplar characteristics affect which stigma-relevant audience responses in what direction. Media creators like journalists and other professional communicators should be aware of possible side effects of specific exemplar depictions, especially when disability-related and inclusion-related topics are discussed. While portrayals of stigmatized individuals are essential and recommended to reduce stigmatization (e.g., Bartlett, 2017), their use can backfire.

In our opinion, four key implications can be derived from our study. First, it should be recognized that even widely recommended counter-stereotypical representations of stigmatized individuals can elicit unintended negative responses. More research is needed to better understand the exemplar and audience characteristics responsible for these effects, as well as their specific interactions. Second, current discussions regarding appropriate media representations of stigmatized individuals are likely misleading, as exemplar effects are not sufficiently considered. A revised and evidence-based communication framework is needed to guide future discussions of appropriate exemplar uses. Third, such a framework needs to specify particularly how to deal with the challenge that some exemplar constellations (e.g., portrayals of male individuals with a learning disability) appear to produce particularly intensive negative reactions. The question arises, for example, as to whether certain exemplar portraits should be communicated to a lesser extent. Reducing the public visibility of particularly stigmatized individuals will likely not help to reduce prejudices and stigmatization, while further (problematic) exemplar depictions can promote stigmatizing generalized responses towards all individuals with a disability, as our study showed. An ethical and practical solution that is accepted by the affected individuals is needed. It should be also examined how these unwanted effects can be countered through changes in other aspects of exemplar depictions. Fourth, it seems essential to sensitize communicators, affected individuals, and perhaps also the public to such unwanted exemplar effects, insofar as they can be replicated by independent studies. As this sensitization strategy will likely change the public perception of exemplars over time, follow-up studies are needed to examine the extent of this effect and possible unwanted results.

5 Conclusion

Taken together, substantial theoretical and practical challenges became evident that point to the need for a more detailed and evidence-based conceptualization of stigmatizing and destigmatizing communication processes (cf. Kunze, 2024) to guide future activities in the context of media literacy, journalism, as well as health communication and anti-stigma communication. More research is needed to better understand the short-term and long-term consequences of news consumption for recipients' views on marginalized groups. Further studies are also needed to examine how unintended stigmatization effects through the use of certain exemplar portrayals can be minimized not only in journalism, but in all health-related public communication.

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 approval was not required for the studies involving humans because data collection procedure was in accordance with local ethical guidelines. All participants were informed of the context of the study prior to participating and were subsequently debriefed in detail regarding the purpose of the experimental stimulus and the details of the questionnaire. Written informed consent for participation was not required from the participants or the participants' legal guardians/next of kin in accordance with the national legislation and institutional requirements because data collection procedure was in accordance with local ethical guidelines.

Author contributions

MH: Conceptualization, Methodology, Project administration, Resources, Supervision, Writing – original draft. AR: Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Supervision, Visualization, Writing – original draft. CK: Writing – review & editing, Data curation, Investigation, Methodology. SM: Data curation, Methodology, Writing – review & editing, Investigation. UR: Resources, 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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Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fcomm.2024.1363367/full#supplementary-material>

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