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Victimization in sexual and reproductive health: Violence, coercion, discrimination and stigma

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Victimization in sexual and reproductive health: Violence, coercion, discrimination and stigma

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Editorial: Victimization in sexual and reproductive health: violence, coercion, discrimination, and stigma

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Editorial on the Research Topic
Victimization in sexual and reproductive health: violence, coercion, discrimination, and stigma

Sexual and reproductive health is a state of physical, mental, emotional, and social wellbeing and not merely the absence of sexual or reproductive disease. This definition implies the right to have a fulfilling and secure sex life. Also, the freedom to make decisions about the functions and processes related to the reproductive system, without risks, coercion, discrimination, and violence. However, conservative and traditional social norms that mark the expected and accepted behavior, limit full development in sexual and reproductive health to individual, cultural, and structural levels. This monograph aims to address sexual and reproductive health limitations due to traditional and conservative value trends. In addition, to address the consequences of these limitations for those who, due to their condition, choice, or personal situation, challenge the normative standards of their community.

Six of the eleven articles in this monograph address reproductive health issues. Corvino and D'Andrea, in a qualitative case study of health care workers in Italy, explore the care experiences of migrant women in childbirth who may come from conservative cultural backgrounds. The results show that members of their community can be coercive in their treatment. In addition, health care protocols that are not socioculturally relevant, generated in them an experience of health care as extremely medicalized, uncomfortable, and even abusive and violent. Xie et al. conducted a systematic review of the impact of the stigma of infertility on mental health and the quality of life of infertile women. They concluded that this stigma is common among women who suffer from infertility. Negative social interaction from the partner, family or community increases the susceptibility to anxiety and depression, suffering from feelings of inferiority, loneliness and guilt.

The remaining four articles on reproductive health deal with issues related to the practice of abortion. Montero et al. and Casas et al. have conducted qualitative studies with key informants in health afield and health system managers in Chile. Montero et al. explore the exercise of conscientious objection to abortion in public institutions. They identify pernicious practices such as declaring conscientious objection without justification or the provision of dissuasive and erroneous information. They conclude that conscientious objection is a barrier to applying abortion law and a form of structural violence. Casas et al. focus their efforts on the difficulties in accessing abortion services due to rape, when the woman does not fit the precepts of the "ideal victim". The authors conclude that in Chile's primary public health system, the breach of these rules involves denying rape survivors victim status. They are treated unfairly and revictimized, making access to abortion difficult and even impossible.

The works by Pérez et al. and Knapton et al. address topics related to community attitudes to abortion from a quantitative perspective. The study by Pérez et al. seeks to design the Community Attitude to Abortion Scale (CAAS) with a Chilean population, which has obtained adequate psychometric properties. The participants who identify with socially conservative religious or political groups show more stigmatizing attitudes to abortion and less agreement with women's empowerment. They also questioned other rights or freedoms, such as euthanasia, LGBTIQ+ rights, or feminism. For their part, Knapton et al. address the radicalization against abortion in the US. They conclude that those participants in the minority regarding the state's opinion on abortion experience greater social exclusion and support for extreme actions. This relation is mediated by need-threat and group identity.

Four of the remaining five articles deal with topics related to sexuality and traditional gender norms from a quantitative perspective. Gómez-Berrocal et al. analyze the association between different profiles of adherence to the sexual double standard (SDS) and individual and contextual variables in the Spanish population. They consider the SDS as a gender bias on sexual behaviors. They conclude the need for a multilevel approach to study this phenomenon, emphasizing aspects such as the framework of relationships between men and women, endogroup favoritism, and the cultural and normative context. Likewise, Orellana et al. identify four profiles of heteronormativity according to the degree of essentialism and normative behavior in Chilean University students. Among the findings, it stands out that, although lesbian, gay, bisexual, and queer participants fit a low level of heteronormativity profile, they also form a profile that adheres to heteronormative behavior without endorsing essentialist beliefs. The authors explain that this may be due to contextual factors and cognitive-cultural schemata.

On the other hand, using mediation models, Sepúlveda-Páez et al. and Tao et al. have studied topics related to the perceived sexual stigmatization in men who have sex with men and its effect on behavioral variables. Sepúlveda-Páez et al. examine internalized homophobia as a risk factor for developing risky sexual behaviors in a Chilean sample. The results include an indirect and inverse effect of internalized homophobia mediated by sexual self-efficacy regarding "having multiple sexual partners". In China, Tao et al. explore the mediating role of self-efficacy and social support in the association between HIV stigma and HIV self-management behaviors such as daily physical health practices. There are no direct influences, but they find significant indirect effects in single and chain mediation models. Both works highlight the importance of considering mediating variables in the examined effects and their importance in understanding the phenomena.

Finally, Stockman et al. performed a systematic meta-review on the impact of sexual violence from an ecological perspective. The results show that sexual violence is associated with multiple types of damage and negative consequences, although also with positive changes. The authors conclude that the aftermath of sexual violence involve a complex interaction of risk and protective factors at multiple levels. These must be considered for a complete understanding of the phenomenon and approach to intervention with survivors. However, they denounce the lack of studies integrating macro-level factors, such as rape myth acceptance to subcultural level.

This Research Topic, therefore, generates new contributions regarding the weight of traditional and conservative cultural norms on the full development of sexual and reproductive health. This is because the authors who contribute to this monograph: report on the potential pernicious role of health professionals in the service and application of the Law when such norms guide behavior; provide a new scale to measure community attitudes to abortion and evidence of the radicalization process in minority opinion groups against abortion; address the consequences of stigma perceived on health and self-care behaviors, like the stigma of infertility, internalized homophobia, and HIV stigma, underscoring the importance of mediating variables for a greater understanding, such as self-efficacy or social support; and they develop typologies based on the assimilation of cultural norms regarding gender and the expression of sexuality, like the SDS and heteronormativity. Definitely, this Research Topic advances understanding of the issue since the studies presented make a substantial contribution to making it visible, understanding the effects and scope of traditional cultural societies on sexual and reproductive health, and producing evidence to mitigate those effects.

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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Behavior without beliefs: Profiles of heteronormativity and well-being among heterosexual and non-heterosexual university students in Chile

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Heteronormativity comprises essentialist, binary beliefs about sex and gender, and normative behaviors derived from those beliefs. There is scarce literature on how heteronormative attitudes and well-being variables are concurrent among individuals who are heterosexual or gay, lesbian, bisexual, and of other queer sexual identities (LGBQ). The objective of this study was to distinguish profiles of university students based on essentialism and normative behavior, two dimensions of heteronormativity, and to characterize these groups by sexual orientation and gender, perceived social support, physical and mental health, and life satisfaction. A sample of 552 university students in Temuco, Chile, responded to an online questionnaire consisting of sociodemographic questions, the Scale of Heteronormative Attitudes and Beliefs, the Life Satisfaction Scale, the Health-Related Quality of Life Index, and the Multidimensional Scale of Perceived Social Support. We used Latent profile analysis to distinguish profiles based on significant score differences in Essentialism and Normative behavior. We identified four heteronormativity profiles: *High heteronormativity* (34.85%), with a significant proportion of heterosexuals and men; *Low heteronormativity* (25.59%), comprising a significant proportion of students who were non-binary, and LGBQ; *Heteronormativity focused on normative behavior* (20.42%), with a significant proportion students who were men or non-binary, and who were lesbian, gay or bisexual or preferred not to disclose their sexual orientation; and *Heteronormativity focused on essentialism* (19.14%), with a significant proportion of heterosexuals and women, and individuals who preferred not to disclose their sexual orientation. The four profiles differed in the proportions of students by faculty and area of residence (urban/rural), and by life satisfaction, self-perceived mental health, and perceived social support. These results show that patterns of association between heteronormativity and subjective well-being are heterogeneous among heterosexual and non-heterosexual individuals. Some of these patterns may respond to the COVID-19 pandemic, which has disrupted daily life and social dynamics. These findings expand our understanding of advantageous and disadvantageous conditions associated with maintaining heteronormativity attitudes, particularly among non-heterosexual individuals.

KEYWORDS

Heteronormativity, subjective well-being, university students, latent profile analysis, LGBTQI+

Introduction

Psychological research increasingly recognizes sexual orientation as an attribute that configures the individuals' personal and social life. Powdthavee and Wooden (2015) have shown that sexual orientation is one of many determinants of life satisfaction and of intermediate variables, such as health, employment, and social support. Other studies on well-being and sexual orientation consistently report that lesbian, gay, bisexual, and other queer individuals such as asexual and pansexual (LGBQ) are at a higher risk of experiencing poorer health and well-being outcomes than heterosexuals (Meyer, 2003; Powdthavee and Wooden, 2015; Cooke, 2018; Pachankis and Bränström, 2018; Mann et al., 2019; Perales, 2019). These disparities are explained by the minority stress model (Meyer, 2003; Meyer et al., 2021), which posits that LGBQ people (often including transgender, non-binary, and intersex individuals, LGBTQI+), as members of a marginalized group, face additional stressors than the general population. For instance, the COVID-19 pandemic and the measures enforced to contain it have imposed severe stressors for the general population, affecting their mental and well-being (Orellana and Orellana, 2020; Barrientos et al., 2021). These effects, however, can be even more pronounced among LGBTQI+ people as they experience more social isolation and more difficulties in expressing their identities (Barrientos et al., 2021), among other conditions.

The origin of minority stressors, and the overall stigmatization of LGBQ people have been traced to the assumption that heterosexual orientation and a binary gender identity are "normal" (Mann et al., 2019), while non-heterosexual and non-binary gender identities are deviant. Heteronormativity is built upon these assumptions (Habarth, 2014; Phipps, 2020). The "normal, acceptable sexual behavior" is heterosexuality, the attraction to persons of another gender assuming that there are two "opposite" genders (Seal, 2019). On this basis, Habarth (2014) defines heteronormativity as the reinforcement of heterosexuality as normal and natural, and as the standard to define what is acceptable for gender roles, sexual behavior, and gender and sexual identities and relations. Heteronormativity does not admit fluidity, only deviations from the norms, being bound with binary notions of sex (male/female), gender identity (man/woman), gender roles (masculine/feminine), and, more recently, sexual identity (straight/gay, but "only a certain kind of homosexuality," Seal, 2019, p. 28).

Heteronormativity entails cultural norms (Farvid, 2015; Bible, 2020), reflected and reinforced in social institutions and structures, such as healthcare (Enson, 2015; Vergara, 2020), education (Enson, 2015), and the workplace (Corlett et al., 2022). This construct, however, also includes cognitive processes that form the basis of prejudice, victimization, and discrimination toward LGBTQI+ people (Habarth, 2014; Ray and Parkhill, 2021; Corlett et al., 2022). Habarth (2014) thus proposed that heteronormativity comprises two dimensions: Essentialist beliefs about the binary nature of sex and gender (Essentialism), and attitudes derived from these beliefs regarding expected behaviors of people as man or woman, individually and in relationships (Normative behavior). This two-dimensional structure of heteronormativity is supported by psychometric evidence from Italy (Scandurra et al., 2021) and Chile (Alarcón et al., manuscript under review). Other research has linked heteronormativity to personality traits (e.g., openness to experience), political attitudes (e.g., right-wing authoritarianism), sexual prejudice, and demographic variables such as sexual orientation and gender (Habarth, 2014; Habarth et al., 2019a,b; Ray and Parkhill, 2021; Scandurra et al., 2021). Further explorations of heteronormativity posit that its nature transcends the realm of sexuality and gender and involve other identity markers and life conditions such as family structure, socioeconomic status, and ethnic origin (Seal, 2019; Pollitt et al., 2021).

Heteronormativity negatively affects all people (Seal, 2019), because it relates to power and hierarchical relations, idealization of specific types of relationships and families, rigid gender norms and stereotypes, normalization of sexual coercion, among others (Farvid, 2015; Wilson, 2022). Nevertheless, the effects of heteronormativity can be more pronounced on queer populations (McDermott et al., 2021). To date, most empirical research on heteronormativity follows a variable-centered approach, that is, observing the average effect of this construct on all individuals in a sample (Bouckenooghe et al., 2018). In our study, we proposed a person-centered approach to group individuals, distinguishing profiles based on how heteronormativity and well-being variables manifested and associated with one another (Choi et al., 2019; Withers, 2020). We thus used Latent Profile Analysis (LPA) to examine groups of individuals or profiles based on Habarth's (2014) two dimensions of heteronormativity, Essentialism and Normative behavior. LPA allows to explore heterogeneity in a population, showing individual differences in psychological phenomena and using supporting variables associated with the latent group membership (e.g., Hardy, 2019). Using LPA, we sought to examine the distinct configurations of Essentialism and Normative behavior and their associations with well-being variables.

The population of interest in this study is university students, using the emerging adulthood framework that covers the developmental period from ages 18 to 29 (Arnett, 2000, 2014; Nelson, 2020). The literature on emerging adulthood characterizes this period as heterogeneous, inasmuch the individuals' choices prevail over the timed accomplishment of developmental milestones compared to previous generations, such as leaving the parental home, getting married, and having children (Nelson, 2020). Researchers have also characterized emergent adulthood as a period in which "nothing is normative"; it is a period of stress and instability, but it also affords individuals opportunities for exploration, reorganization of relationships and self-focus, and ultimately, for establishing their life trajectory (Nelson, 2020). Of interest to our study, emergent adulthood is also marked by an exploration of sexual identity (Arnett, 2007; Hong et al., 2015). For LGBTQI+ emergent adults, attending university entails new conditions and resources that allow them to disclose their sexual orientation or gender identity in their expanding social environment (Nelson, 2020). Studies with university students in Chile have explored both their experiences as emergent adults (Barrera-Herrera and Vinet, 2017), and their well-being and life satisfaction (Schnettler et al., 2015). Findings from these studies highlight that, compared to populations in other developmental periods, university students experience a distinct development of sexual identity and social relationships (Barrera-Herrera and Vinet, 2017), and report lower life satisfaction (Schnettler et al., 2015). Furthermore, the COVID-19 pandemic has disrupted the life trajectories of emergent adults, altering their access to education and sources of social support outside the home, and often confining them to the family home (Orellana and Orellana, 2020; Barrientos et al., 2021). For LGBTQI+ people, these alterations can also mean having to conceal their sexual or gender identity or expressing it while dealing with their family's rejection (Barrientos et al., 2021).

The context of higher education tends to be more welcoming toward sexual and gender identities than other social spheres, but it still reinforces a heteronormative worldview (Rodríguez-Mena et al., 2018; Bautista, 2019; Seal, 2019). Research on heteronormativity in higher education (Hong et al., 2015; Seal, 2019) reveals an environment of direct and structural discrimination, including language, administrative practices, heteronormative examples in class, relations between students and staff, and discussions that intend to tackle discrimination but reinforce the othering of LGBTQI+ people. Heteronormativity manifests not only in the classroom, but in social spaces in campus, such as cafeterias, soccer fields, hallways, and bathrooms (Maldonado-Ramírez, 2015; Seal, 2019). Heteronormativity can also be displayed differentially in masculinized and feminized fields (Maldonado-Ramírez, 2015; Corlett et al., 2022). Of note in this regard, Habarth et al. (2019a) have shown that attaining higher education is associated with lower heteronormativity in women, but not in men, suggesting that attending university on its own does not counter heteronormative attitudes. Universities also tend to be in urban areas, which have been associated with the free development and expression of sexual identity (Barrientos-Delgado et al., 2014; Giano et al., 2020). Giano et al. (2020) indicate that most studies with LGBTQI+ populations are conducted in urban areas, although these areas in conservative regions can still be characterized by opposition to these non-normative identities. On the other hand, according to the above authors, rural areas are not homogeneous, and they may also present protective factors for LGBTQI+ populations.

Heteronormativity varies by gender and sexual orientation. There is evidence that heteronormativity is higher in men than in women, higher in heterosexuals than in non-heterosexuals, and higher in gay men and lesbians than in bisexuals (Habarth, 2014; Habarth et al., 2019a,b). In terms of gender, heteronormativity maintains a social hierarchy, and Ray and Parkhill (2021) state that heterosexual men who adhere more to heteronormativity feel more threatened in their social status by gay men. In terms of sexual orientation, Pollitt et al. (2021) indicate that there is scarce research on how LGBTQI+ young adults navigate heteronormativity, but evidence shows that they can both challenge and reinforce gender expression norms. Discourses may present LGBTQI+ identities and heteronormativity as mutually excluding (see Beltrán y Puga, 2012), but heteronormativity is engrained in daily life and it affords benefits to those who endorse these attitudes, even if they belong to socially disadvantaged groups, such as women and non-heterosexual people (Habarth et al., 2019b; Seal, 2019). For instance, Pollitt et al. (2021) found that LGBQ young adults have internalized the traditional "true" family formation (blood relations and children born from biological parents) as an ideal, even if it appears unattainable to them.

The link between heteronormativity and subjective well-being is an emergent interest in the literature. Researchers have reported differences in life satisfaction based on sexual orientation (Powdthavee and Wooden, 2015; Pachankis and Bränström, 2018; Habarth et al., 2019b; Bartram, 2021), and these differences may be partly explained by heteronormativity (Mann et al., 2019). Life satisfaction is the cognitive component of subjective well-being, and it is a measure of the person's assessment of their overall life conditions (Diener et al., 1985). In our study, we follow the bottom-up perspective of life satisfaction, which assumes that individuals' life satisfaction depends on their satisfaction in concrete areas or domains of their life (Loewe et al., 2014). The distinctions in life satisfaction and other well-being factors by sexual orientation are nuanced, however, as these have been observed between heterosexuals and non-heterosexuals, but also within the latter group, and with distinctions by gender and other sociodemographic characteristics. In Chile, Barrientos et al. (2017) found that lesbian women reported higher life satisfaction than gay men, as the latter experience more social punishment and higher internalized homophobia (Barrientos et al., 2017; Mann et al., 2019; Bartram, 2021). In the United Kingdom, Mann et al. (2019) found that homosexual and bisexual people report lower life satisfaction than heterosexuals, but these distinctions are heterogeneous and depend also on gender. Studies with samples from the United Kingdom and Australia (Powdthavee and Wooden, 2015; Mann et al., 2019; Bartram, 2021) also highlight two under-researched sexual orientation groups who consistently show lower life satisfaction, due to distinct minority stressors: Bisexuals and those who identify as "other" or "prefer not to say" (i.e., to disclose their sexual orientation), the latter reportedly not being LGBQ, but also not identifying as heterosexual.

Non-heterosexual individuals experience, on average, worse physical and mental health than heterosexuals (Przedworski et al., 2015; Bränström et al., 2016). The minority stress model suggests that heteronormativity leads to stigmatization and discrimination of non-heterosexual people and shows that, in turn, this mistreatment can have adverse effects on health and well-being (Hardy, 2019; Mann et al., 2019; Bible, 2020), and on self-perceived health (Powdthavee and Wooden, 2015). Studies have linked heteronormativity to sexual health in women (Bible, 2020) and psychological functioning in heterosexual and LGBQ women (Habarth et al., 2019b). This second study highlights the importance of accounting for the distinct effects of Essentialism and Normative behavior in health-related measures.

Besides health, one of the most relevant protective factors of well-being, particularly for university students, is the social support perceived from different sources (Zimet et al., 1988; Schnettler et al., 2015; Barrera-Herrera and Vinet, 2017; Orellana et al., 2022). Perceived social support involves being cared for by others and feeling esteemed and valued as part of a social network that entails reciprocal assistance and obligation (Hardy, 2019). The main support sources for university students include family (Schnettler et al., 2017b; Barrera-Herrera et al., 2019), friends (Amati et al., 2018), and other significant persons such as teachers (Seal, 2019; López-Angulo et al., 2020), online social networks (Craig et al., 2021), among others. The COVID-19 pandemic has altered the quality and access that students have to these sources, however. Confinement measures have enforced a physical and social distance that has kept individuals isolated from important social relations, increasing their vulnerability in terms of well-being and mental health (Barrientos et al., 2021).

Social support has been positively linked to several well-being variables including life satisfaction (Domínguez-Fuentes et al., 2012; Schnettler et al., 2015, 2018) and mental health (McDermott et al., 2021). Sexual orientation also plays a role in the nature and effects of social support. In a study of LGBTIQ+ well-being profiles, Hardy (2019) reported that the impact of social support depends on whether the focus is general support (e.g., increased life satisfaction), or it relates specifically to the LGBTIQ+ identity (e.g., decreased internalized sexual prejudice). Moreover, different sources of social support can make distinct contributions to the individual's well-being when accounting for sexual orientation. A previous study with Chilean university students, conducted during the COVID-19 quarantine period, showed that heterosexuals reported higher family support than lesbians, gays, and bisexuals, but the latter group had higher support from friends and other relevant people (Orellana et al., 2022).

Heteronormativity also plays a role in how individuals engage with different social support sources. Family support is essential for Chilean university students' development (Schnettler et al., 2015, 2018; Barrera-Herrera and Vinet, 2017), but family relationships are a point of contention for LGBTQI+ people, particularly youth (McDermott et al., 2021). The family is the primary site where heteronormativity is produced and reinforced, fusing together gender, sexual, and family ideologies (Goldberg et al., 2017). Heteronormativity can turn family relationships oppressive and hostile, as families can conduct heteronormative surveillance; LGBTQI+ individuals juggle the need for autonomy and authenticity and the need to stay with their family for belonging and safety (Barrientos et al., 2021; McDermott et al., 2021). However, LGBTQI+ people may also align with heteronormative ideals about family (Pollitt et al., 2021), or they may downplay their sexuality, even as adults, to avoid disrupting family harmony (Goldberg et al., 2017). In contrast with the obligations of family, individuals can freely choose their friendship and other relevant social networks. However, the nature of same-gender and cross-gender friendships and acquaintances can still be conditioned by heteronormativity, given its essentialist assumption of ever-present sexual tension between men and women (Gillespie et al., 2015); the prioritization of coupledom over other emotional bonds (Cronin, 2015); and, particularly for men, because traditional masculinity ideals can preclude them from forming emotional bonds with other men (Ríos-González et al., 2021).

Against this background, the aim of this study was to distinguish heteronormativity profiles of university students, based on Essentialism and Normative behavior. A second aim was to characterize these profiles by sociodemographic characteristics (gender, sexual orientation, faculty, and area of residence), and by their association with well-being variables, namely, life satisfaction, self-perceived physical and mental health, and perceived social support from family, friends, and relevant others, in the context of the COVID-19 pandemic.

Materials and methods

Participants

The sample comprised 552 university students in Temuco, Chile, who responded to an online questionnaire. Inclusion criteria were to be over 18 years old and to attend university in Temuco. Although power analysis is not necessary for Latent Profile Analysis (LPA), given the complexity of the parameter values involved, a systematic review on this subject (Spurka et al.,

2020) suggests that a sample size of 500 cases allows for a sufficiently accurate identification of the correct number of latent profiles.

Table 1 displays the sociodemographic characteristics of the sample. The mean age of participants was 20.9 years. Most participants were women (74.8%), followed by men (20.9%) and non-binary/fluid (4.3%). Regarding sexual orientation, 45.8% of students were heterosexual, 31.5% bisexual, 10.5% gay or lesbian, 6.5% other orientation (i.e., pansexual, asexual and others grouped here as queer), and a remaining 5.6% preferred not to disclose their sexual orientation. Participants' gender identity (i.e., cisgender or transgender) was not part of the analysis, but the questionnaire included a question to ask whether the gender reported (woman, men, or non-binary) coincided with the gender assigned at birth (if yes = participant is cisgender, if no = participant is transgender, see Brandelli et al., 2022; by this definition, non-binary genders are categorized under the transgender spectrum). This two-fold distinction was relevant to identify heterosexual transgender students, but all participants who identified as transgender in our sample also identified as non-heterosexual. Lastly, most students reported living in an urban area (78.8%) versus those who lived in a rural area (21.2%), and most belonged to faculties of Health Sciences (26.4%), Social Sciences and Humanities (18.8%), Education (13.8%), and Engineering and Computer Sciences (13.6%).

TABLE 1 Sociodemographic characteristics of the sample.

Variable		%
Age [*M* (SD)]		20.98 (2.82)
Gender	Male	20.8
	Female	74.8
	Non-binary	4.3
Sexual orientation	Heterosexual	45.8
	Gay/lesbian	10.5
	Bisexual	31.5
	Other	6.5
	Prefer not to say	5.6
Living with parents	All year round	72.1
	During weekends/holidays	13.4
	Independent from parents	14.5
Area of residence	Urban	78.8
	Rural	21.2
Faculty	Health sciences	26.4
	Social sciences and humanities	18.8
	Legal, economic, and business sciences	9.1
	Education	13.8
	Engineering and computing sciences	13.6
	Agricultural and forestry sciences	3.3
	Architecture, arts and design	7.2
	Other	7.8

Instruments

Sociodemographic questions

This section included questions about participants' age; gender: men, woman, non-binary; whether this gender coincided with the one assigned at birth (see Participants); sexual orientation: heterosexual, lesbian/gay, bisexual, other (with open-ended question to specify), and prefer not to say; area of residence: urban, rural; and faculty.

Heteronormative attitudes and beliefs scale

Habarth (2014) proposed this 16-item scale to operationalize heteronormativity using two dimensions: Essential sex and gender (Essentialism) and Normative behavior. Sample items for each dimension are, respectively, *All people are either male or female* and *In intimate relationships, people should act only according to what is traditionally expected of their gender*. Likert response options range from 1 = Strongly disagree to 7 = Strongly agree. Habarth (2014) reported reliability coefficients of $\alpha = 0.92$ for the Essential sex and gender subscale and $\alpha = 0.78$ for the Normative behavior subscale. We used a shorter, 8-item version of the HABS (HABS-8), translated to Spanish and validated in a sample of Chilean university students, and with each dimension composed of four items (Alarcón et al., manuscript under review). This validation study reported $\alpha = 0.78$ for the whole scale, $\alpha = 0.73$ for the Essential sex and gender subscale, and $\alpha = 0.77$ for the Normative behavior one.

Satisfaction with life scale

Diener et al. (1985) proposed this scale, which is composed by five items that evaluate individuals' global cognitive evaluations of their own life. A sample item is: *In most ways my life is close to my ideal*. Likert response options range from 1 = Completely disagree to 6 = Completely agree. Research using the SWLS in Chilean university simples report Cronbach's Alpha values ranging from 0.87 to 0.89 (Schnettler et al., 2018). In this study, reliability was $\alpha = 0.85$.

Health-related quality of life index (HRQOL-4)

Hennessy et al. (1994) developed this instrument consisting of four items that explore individuals' overall self-perception of health, recent physical and mental health problems (number of days with illness or discomfort experienced in the last 30 days), and limitations on daily activity due to health issues. We used two of these four items that explored the number of days in which participants experienced either physical or mental health problems in the last 30 days at the time of responding the questionnaire. We used the Spanish version of the HRQOL-4 applied by Schnettler et al. (2017a).

Multidimensional scale of perceived social support

Zimet et al. (1988) developed this 12-item scale that measures individuals' perceived support from family, friends, and other relevant persons. Each of these three dimensions also represent a subscale. Sample items are: *I can talk about my problems with my family*; *my friends really try to help me*; *there is an important person in my life who cares about my feelings*. Likert response options range from 1 = Completely disagree to 7 = Completely agree. Research with Chilean university samples have reported $\alpha = 0.80$ for the whole scale (Orellana et al., 2022). In this study, Cronbach's alpha values were $\alpha = 0.89$, $\alpha = 0.92$, and $\alpha = 0.85$ for family, friends, and other relevant persons, respectively.

Procedure

The invitation to participate in this study was distributed through four universities in the city of Temuco and through local student and LGBTIQ+ groups. This invitation included a link to the questionnaire. The first page of this questionnaire displayed the informed consent form (also available for download), which explained the objectives of the study, the inclusion criteria, the voluntary nature of participation, and the anonymous and confidential treatment of the data. Participants were asked to check a box to confirm their participation. This questionnaire was distributed between July and August 2021. Response times ranged between 10 and 15 min. Prior to this procedure, we conducted a pilot test with 24 students who met the inclusion criteria.

This study belongs to a larger research project on sexual orientation and life satisfaction in Chilean university students (ANID – Proyecto Fondecyt Postdoctoral 3210003). This research was approved by the Ethics Committee of Universidad de La Frontera.

Data analysis

The online questionnaire was hosted on the QuestionPro platform. We analyzed the data using the Statistical Package for Social Sciences (IBM SPSS), v. 26, and we established the heteronormativity profiles using LatentGold v. 5.1 (Statistical Innovations Inc.). We first revised the database to remove incomplete questionnaires and those which did not fulfill the inclusion criteria. We then calculated frequencies and descriptive analysis, overall scores, and Cronbach's Alpha to examine the reliability of the measures. Score averages and statistical differences by gender and sexual orientation are presented in Supplementary material.

We followed a two-step process to identify heteronormativity profiles based on Essentialism and Normative behavior, the two dimensions of heteronormativity according to Habarth (2014). The first step was to group participants based on their Essentialism and Normative behavior scores. We conducted a latent profile analysis (LPA) for continuous variables to estimate the number of profiles for students, and calculated z-scores for each heteronormativity dimension. We used the Bayesian Information Criterion (BIC) and Consistent Akaike's Information Criterion (CAIC) values to choose the most fitting solution using gender and sexual orientation as covariates. For these values, lower scores indicate a better model fit.

For the second step in this analysis, we characterized the resulting heteronormativity profiles based on statistical differences in all variables concurrent with these scores. To describe characteristics associated with these profiles, we used Pearson's Chi^2 test for discrete variables, and analysis of variance (ANOVA) for continuous variables. We used Levene's statistic to identify homogeneous and non-homogenous variances in the continuous variables. These variables showed non-homogeneous variances, and thus, we used Dunnett's T3 Multiple Comparisons test ($p < 0.001$).

Results

We conducted a LPA to distinguish profiles of heteronormativity in university students. This analysis resulted in an initial run of 1–15 clusters based on the z-scores from Essentialism and Normative behavior (Table 2). The four-cluster model showed the best fit with the lowest BIC and CAIC values (Vermunt and Magidson, 2002). Moreover, in this four-profile solution, the z-scores of the two heteronormativity dimensions made a significant contribution to the overall model, according to the robust Wald statistics and R^2 values (Table 3).

The profiles differed in Essentialism ($F = 252.143$, $p < 0.001$) and Normative behavior ($F = 279.305$, $p < 0.001$), as shown in Figure 1. Students in these profiles also differed by number of days in which they experienced mental health issues ($p \leq 0.001$), by perceived social support from family, friends, and other relevant persons ($p \leq 0.01$), and by life satisfaction ($p = 0.002$). Table 4 displays these scores. The profiles did not significantly differ in the number of days with physical health issues ($p = 0.619$). For sociodemographic characteristics, the profiles differed in gender, sexual orientation, area of residence, and faculty (Table 5). The four profiles are described below.

Profile 1: High heteronormativity (34.85%)

Students in this profile scored significantly higher than the rest of the profiles in both Essentialism and Normative behavior ($p < 0.001$). These participants also had the highest score in life satisfaction, but this score only differed significantly from Profile 4 ($p = 0.002$). Perceived family support was the highest among the profiles, and this score was significantly higher than for Profiles 3 and 4 ($p = 0.003$). This profile had the lowest score for support from friends, but it only differed statistically from Profile 2 ($p = 0.005$); and it had the second highest score for support from others, but it did not differ from the other three groups. These participants reported fewer days with mental health issues, but this number was only significantly lower than that of Profile 4 ($p = 0.005$). This profile had a statistically higher proportion of

TABLE 2 Summary of latent profile cluster models.

Model	LL	BIC (LL)	CAIC (LL)	Npar	Classification error
1-cluster	−1565.5072	3156.2687	3160.2687	4	0.000
2-cluster	−1257.7114	2610.1259	2625.1259	15	0.0619
3-cluster	−1095.0183	2354.1889	2380.1889	26	0.0928
4-cluster	−993.4946	**2220.5904**	**2257.5904**	37	0.1175
5-cluster	−959.1077	2221.2657	2269.2657	48	0.1206
6-cluster	−929.1245	2230.7483	2289.7483	59	0.1476
7-cluster	−901.0498	2244.0480	2314.0480	70	0.1381
8-cluster	−881.6162	2274.6298	2355.6298	81	0.1364
9-cluster	−849.6166	2280.0796	2372.0796	92	0.1517
10-cluster	−827.4649	2305.2252	2408.2252	103	0.1242
11-cluster	−799.5098	2318.7641	2432.7641	114	0.1545
12-cluster	−773.7313	2336.6560	2461.6560	125	0.1367
13-cluster	−748.6027	2355.8480	2491.8480	136	0.1274
14-cluster	−752.4883	2433.0681	2580.0681	147	0.1410
15-cluster	−742.0441	2418.6287	2639.6287	158	0.1403

LL, Log-likelihood; BIC (LL), Bayesian information criterion base on the log-likelihood; CAIC (LL), Consistent Akaike's Information Criterion; Npar, Number of parameters.
Values in bold indicate model with the best fit.

TABLE 3 Significance of the indicators for the profiles.

	Robust Wald statistics	*p* Value	R^2
Essentialism	482.9142	2.4e-104	0.5468
Normative behavior	457.1661	9.1e-99	0.5583

men and heterosexual individuals, and a significantly lower proportion of women and non-binary people, and individuals who were LGBQ ($p < 0.001$). This profile had both a high proportion of students living in rural areas and a low proportion of students in urban areas ($p = 0.042$). Lastly, this profile had a significantly lower proportion of students from faculties of Social Sciences and Humanities and Agricultural and Forestry Sciences ($p < 0.001$).

Profile 2: Low heteronormativity (25.59%)

Participants in this profile had a low score in Essentialism, significantly lower than those of Profile 1 and Profile 4 ($p < 0.001$). Their Normative behavior score was significantly the lowest of all Profiles ($p < 0.001$). Life satisfaction and family support scores in this profile did not significantly differ from the other three profiles. Perceived support from friends was the highest, but it was only significantly higher than that of Profile 1 ($p = 0.005$), while support from others was the highest, and significantly higher than for Profiles 3 and 4 ($p = 0.009$). Participants in this profile did not differ significantly from the other three in terms of number of days with mental health issues. This profile had a significantly high proportion of non-binary students and a significantly low proportion of men ($p < 0.001$); it also had the highest proportion of LGBQ students. A significantly high proportion of students were from faculties of Social Sciences and Humanities ($p < 0.001$).

Profile 3: Heteronormativity focused on normative behavior (20.42%)

Students in this profile had the lowest score for Essentialism, significantly lower than that Profiles 1 and 4 ($p < 0.001$). Normative behavior was significantly lower than in Profile 1, and significantly higher than in Profiles 2 and 4 ($p < 0.001$). These students had the lowest score for perceived family support, but it was only significantly lower than Profile 1 ($p = 0.003$). This profile did not differ from the other three in terms of support from friends but reported significantly lower support from others compared to Profile 2 ($p = 0.009$). Both life satisfaction scores and number of days with mental health issues were statistically similar to those from the other three profiles. In terms of sexual orientation, it had a significantly low proportion of heterosexual students, and a high proportion of gay/lesbian and bisexual students ($p < 0.001$). There was a high proportion of students from faculties of Social Sciences and Humanities and Agricultural and Forestry, and a low proportion from Legal, economic, and business sciences.

Profile 4: Heteronormativity focused on essentialism (19.14%)

This profile had a mid-high score in Essentialism, significantly lower than Profile 1 and significantly higher than Profiles 2 and 3 ($p < 0.001$). Conversely, its Normative behavior score was lower than that of Profiles 1 and 3, and significantly higher than Profile 2 ($p < 0.001$). Participants in this profile had a significantly lower score for family support than Profile 1 ($p = 0.003$). Scores for perceived support from friends did not differ from the other profiles, and scores for social support from others differed significantly only from Profile 2 ($p = 0.009$). This profile also had

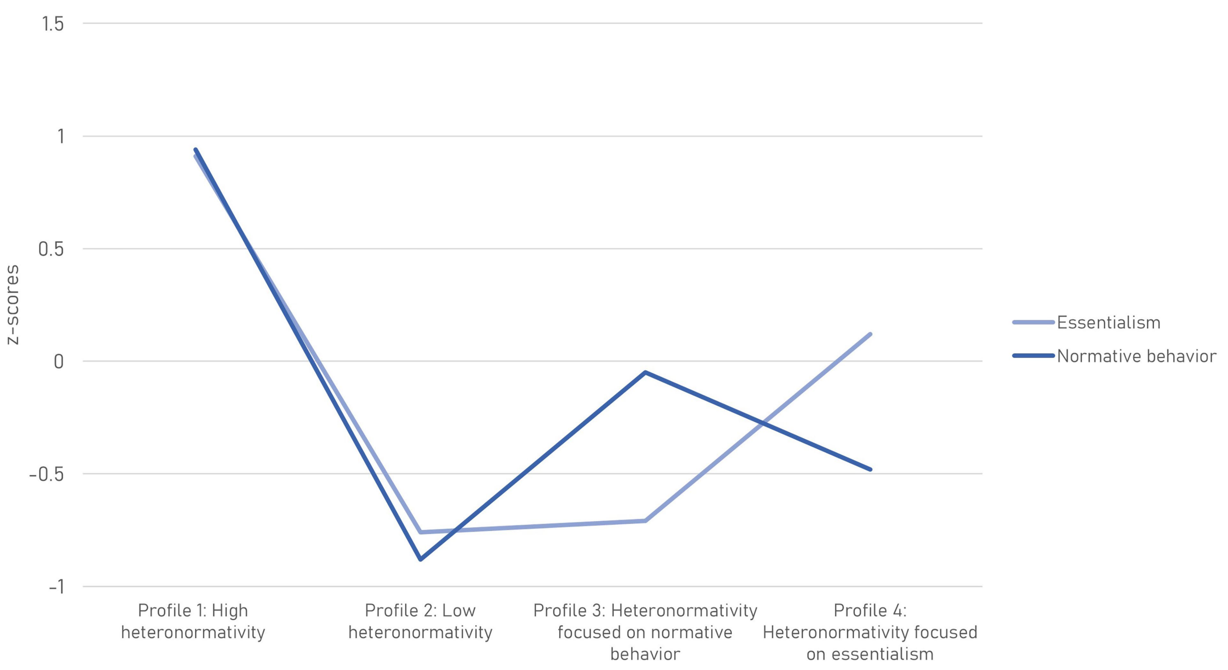

FIGURE 1
Heteronormativity profiles based on the scores of Essentialism and Normative behavior, the two dimensions of heteronormativity according to Habarth (2014). Differences in each dimension for each profile were $p < 0.001$.

TABLE 4 Average scores (*z*-scores) by profile for perceived social support, number of days with mental health issues in the last month, and life satisfaction.

	Profile 1a (34.85%)	Profile 2b (25.59%)	Profile 3c (20.42%)	Profile 4d (19.14%)	*F*	*p* Value
Family support	14.48 A	14.15 AB	13.00 B	13.13 B	4.79	0.003
Friends support	14.73 B	16.30 A	15.35 AB	15.18 AB	4.38	0.005
Others support	15.46 AB	16.35 A	15.03 B	14.79 B	3.90	0.009
Number of days with mental health issues	15.06 B	17.34 AB	17.25 AB	19.43 A	4.29	0.005
Life satisfaction	18.82 A	17.68 AB	17.26 AB	16.32 B	5.00	0.002

Capital letters on each row indicate significant differences according to Dunnett's T3 multiple comparisons test. a, High heteronormativity; b, Low heteronormativity; c, Heteronormativity focused on normative behavior; d, Heteronormativity focused on essentialism.

the lowest score in life satisfaction, and the highest number of days with mental health issues, but in both cases, it only differed significantly from Profile 1 ($p = 0.002$ and $p = 0.005$, respectively). There was a significantly low proportion of men and a high proportion of women ($p < 0.001$), and a significantly high proportion of students who preferred not to report their sexual orientation ($p < 0.001$). This profile had a high proportion of students from faculties of Education.

Discussion

We examined profiles of heteronormativity, composed by essentialism and normative behavior (Habarth, 2014), and well-being among university students. Using Latent Profile Analysis and mean group comparisons, we examined the within-group association patterns of these two dimensions, sociodemographic characteristics, and well-being variables. We found a four-model solution comprising the profiles of High heteronormativity (Profile 1), Low heteronormativity (Profile 2), Heteronormativity focused on normative behavior (Profile 3), and Heteronormativity focused on essentialism (Profile 4). These findings emerge in the context of the COVID-19 pandemic, which has altered social relationships and life trajectories, affected people's well-being, and increased the vulnerability of minority groups. These results show that heteronormativity can be found in heterogeneous configurations among students of different sexual orientations and genders, and that these configurations may be linked to life conditions and experiences, such as area of residence,

TABLE 5 Sociodemographic characteristics (%) with significant differences by profile.

Variable		Profile 1a	Profile 2b	Profile 3c	Profile 4d	*p* Value
Gender	Male	**35.7**	*12.8*	20.0	*6.8*	<0.001
	Female	*64.3*	79.9	73.9	**87.4**	
	Non-binary	*0.0*	**7.4**	6.1	5.8	
Sexual orientation	Heterosexual	**83.8**	*21.5*	*13.0*	49.5	<0.001
	Gay/lesbian	*3.8*	**14.8**	**20.0**	5.8	
	Bisexual	*8.6*	**46.3**	**53.0**	27.2	
	Other (queer)	*0.5*	**12.1**	9.6	5.8	
	Prefer not to say	3.2	5.4	4.3	**11.7**	
Area of residence	Urban	*71.9*	83.2	82.6	80.6	0.042
	Rural	**28.1**	16.2	17.4	19.4	
Faculty	Health sciences	30.3	*22.8*	27.0	24.3	<0.001
	Social sciences and humanities	*9.2*	**28.2**	**25.2**	15.5	
	Legal, economic, business sciences	11.9	12.1	*4.3*	4.9	
	Education	11.9	11.4	10.4	**24.3**	
	Engineering, computing sciences	16.8	10.1	14.8	11.7	
	Agricultural, forestry sciences	*1.1*	3.4	**7.0**	2.9	
	Architecture, arts and design	8.1	6.7	6.1	7.8	
	Another	10.8	5.4	5.2	8.7	

p values obtained from Chi^2 test. Values in bold represent a statistically high proportion (%) of cases in the profile, indicated by adjusted residuals >2.0. Values in italics represent a statistically low proportion (%) of cases in the profile, indicated by adjusted residuals <−2.0. a, High heteronormativity; b, Low heteronormativity; c, Heteronormativity focused on normative behavior; d, Heteronormativity focused on essentialism.

faculty, perceived social support, self-perceived mental health, and life satisfaction.

Essentialism and normative behavior across gender and sexual orientation

The sample was distributed among two "consistent" heteronormativity profiles and two "mixed" profiles, based on their degree of essentialism and normative behavior (see Figure 1). In the consistent profiles, both dimensions had high or low scores, namely, 34.85% of students showed high heteronormativity, while 25.59% showed low heteronormativity. In the two mixed profiles, these dimensions had diverging scores (one high, the other low), with 20.42% of the sample categorized as having Heteronormativity focused on normative behavior, and the remaining 19.14% as having Heteronormativity focused on essentialism (19.14%). These findings support the proposition that Essentialism and Normative behavior are two distinct dimensions of heteronormativity (Alarcón et al., manuscript under review; Habarth, 2014; Scandurra et al., 2021), one related to essentialist binary beliefs about sex and gender, and the other related to attitudes toward the expected roles and behaviors of men and women as individuals and in relationships.

Profiles 1 and 2 displayed the consistency of association between Essentialism and Normative, as two components of a larger construct. Moreover, the sociodemographic characteristics statistically represented in these two profiles are attributes that previous research has associated with heteronormativity. Profile 1, High heteronormativity, was significantly composed by students who were men and heterosexual, in keeping with findings that men have higher heteronormativity than women (Habarth, 2014; Habarth et al., 2019a; Scandurra et al., 2021). This result is expected because heteronormative beliefs and behaviors sustain a social hierarchy that is most protected by heterosexual men (Corlett et al., 2022), because it entails a position of power and advantage over other groups (Farvid, 2015). Additionally, heteronormativity encompasses masculinity norms (Ray and Parkhill, 2021), to which men must rigidly adhere to benefit from this social hierarchy. On the other hand, Profile 2, Low heteronormativity, comprised students who reported both low Essentialism and Normative behavior. This profile also had a significant proportion of students who were lesbian, gay, bisexual or queer (LGBQ) and of a non-binary gender. Individuals with these characteristics are the most at risk of experiencing minority stress derived from heteronormativity (Mann et al., 2019), as the markers of their sexual and gender identities (e.g., patterns of attraction, gender expression) stand against binary and essentialist expectations about how "men and women" are and how they behave, individually and toward one another.

The other two profiles, Profiles 3 and 4, are mixed because they show different configurations of Essentialism and Normative behavior, supporting evidence that these two dimensions of heteronormativity are correlated but distinct (Alarcón et al., manuscript under review; Habarth, 2014; Scandurra et al., 2021). Profile 3, Heteronormativity focused on normative behavior, was significantly comprised by lesbian, gay and bisexual (LGB) students, with no significant proportions by gender. The finding that LGB students adhere to heteronormative behavior without significantly endorsing essentialist beliefs may be explained by a contextual factor and by cognitive-cultural schemas. We address the contextual factor, the confinement measures during the COVID-19 pandemic, in our discussion about family support. On the other hand, a cognitive-cultural schema guides compliance with heteronormativity through artifacts and activities, leading people to behave following a ritualized action or a normative expectation (Corlett et al., 2022). LGB individuals may thus have positive attitudes toward Normative behavior because these norms are expected, appropriate, or taken for granted. Moreover, compliance with normative behavior may be an identity management strategy to avoid disclosing their sexual orientation (or gender identity) to others; disclosure is both a proximal stressor and a protective factor in the minority stress model (Meyer, 2003), because "doing sexuality" is exposing oneself to risk (Goldberg et al., 2017). Hence, Profile 3 shows that LGB people are not automatically "beyond heteronormativity" (Beltrán y Puga, 2012). These individuals challenge aspects of heteronormativity that question the foundations of their identity (e.g., sexual and gender essentialism), but they can also maintain –due to internalization or for their safety– beliefs and behaviors that reinforce the appropriateness of normative sexual and gender expressions and partnership/family configurations (Goldberg et al., 2017; Pollitt et al., 2021).

The second mixed profile was Profile 4, Heteronormativity focused on essentialism, which comprised students who had both a distinctly high score in Essentialism and a low score in Normative behavior, compared to the other three profiles. This profile had a significant proportion of women and of students who preferred not to report their sexual orientation. Pollitt et al. (2021) posit that heteronormativity can be indeed reinforced by upholding traditional beliefs about gender, sexuality, and related constructs, such as family. Students in this profile may classify sexuality, and specifically heterosexuality, as a natural quality that precedes social life (Maldonado-Ramírez, 2015). Given its proportions by gender, this profile appears to comprise a disadvantaged group. Nevertheless, for people such as those in Profile 4, the question remains why the acceptance of heteronormative behavior does not significantly manifest alongside these essentialist beliefs. A possible explanation is that women are highly exposed to heteronormative messages that stigmatize them and their sexuality (Bible, 2020), and resistance to this stigma (Seal, 2019) may take the form of challenging gendered expectations through non-normative behavior. A second explanation may be related to the current measure of Normative behavior from the Heteronormative Attitudes and Belief Scale (HABS). Habarth et al. (2019b) have hypothesized that it may be not assess attitudes that are relevant to women, particularly heterosexual ones. Future studies should address this possibility and expand on this measure.

One last notable characteristics of Profile 4 is the significant proportion of students who preferred not to disclose their sexuality. Other researchers have encouraged to observe this group (Powdthavee and Wooden, 2015; Mann et al., 2019; Bartram, 2021). These are individuals who do not identify as heterosexual nor as LGBQ but report lower life satisfaction than heterosexuals. Thus, they may be experiencing systematically different protective and risk factors related to their sexual orientation and well-being.

We identified two other sociodemographic differences in these profiles. The first one is area of residence. Profile 1 had a significantly higher proportion of students from rural areas, which have been characterized as contexts of lower acceptance of non-normative sexual and gender identities, compared to urban areas (Barrientos-Delgado et al., 2014; Giano et al., 2020). A second sociodemographic difference between profiles was faculty. This finding is in keeping with the notion that occupational sectors and industries are gendered (Corlett et al., 2022). Feminized fields were significantly represented in the three profiles with high proportions of women and non-binary people and non-heterosexuals: Social Sciences and Humanities in Profiles 2, 3, and 4, and Education in Profile 4. Some studies (Maldonado-Ramírez, 2015; Phipps, 2020; Corlett et al., 2022) highlight that masculinized fields (e.g., law enforcement, engineering, certain sports) consider "feminine others" as a threat to be controlled and punished, which maintains a power hierarchy with traditionally masculine heterosexual men at the highest positions. This distinction by faculties in the profiles is relevant to the discussion of how to identify and challenge heteronormativity in higher education (see Seal, 2019). Future research should explore the sexuality and gender norms that are reinforced and those that are questioned among students and staff from different academic fields.

Heteronormativity and well-being indicators

We characterized heteronormativity profiles with variables that the literature links to subjective well-being: Life satisfaction, social support from family, friends, and relevant others, and a measure of self-perceived physical and mental health (i.e., number of days with physical and mental health problems in the last month). These variables have been previously explored in Chilean university students (Schnettler et al., 2015, 2017b; Barrera-Herrera and Vinet, 2017), and have been assessed by sexual orientation in youth and adult populations (Powdthavee and Wooden, 2015; Bränström et al., 2016; Cooke, 2018; Pachankis and Bränström, 2018; Hardy, 2019). The latter line of research indicates that non-heterosexual people experience lower well-being compared to their heterosexual counterparts, albeit with nuances related to concurrent individual characteristics and life conditions. Our results support these nuances in life satisfaction, social support, and self-perceived health, and highlight the heterogeneity in the association patterns between these variables and the two dimensions of heteronormativity.

For life satisfaction, based on previous findings (Powdthavee and Wooden, 2015; Mann et al., 2019; Bartram, 2021) and on the minority stress model (Meyer, 2003; Meyer et al., 2021), we expected that profiles with significant proportions of non-heterosexual students (LGBQ and those who preferred not to identify) would report lower life satisfaction than profiles with heterosexual students. On the contrary, the profiles with the highest proportions of LGBQ students, Profiles 2 and 3, were statistically undistinguishable from the other two profiles in terms of life satisfaction. Studies with adults from Australia and the United Kingdom (Powdthavee and Wooden, 2015), and from other European countries (Pachankis and Bränström, 2018), show that non-heterosexual individuals experience economic, social, and personal factors that explain their lower life satisfaction compared to heterosexual people. In our sample, there may be factors related to culture (developed versus developing countries), life period (adulthood versus emerging adulthood/attending university), and context (COVID-19 pandemic) that can help explain the similarities in life satisfaction by sexual orientation among students in these profiles. Another study conducted during the pandemic with Chilean university students found no differences in life satisfaction between heterosexual and LGB students (Orellana et al., 2022). These findings suggest that, as Chilean university students have shown a mid-to-low baseline of life satisfaction (Schnettler et al., 2015, 2017b), there may be intermediate protective factors against minority stressors for non-heterosexual students. Hence, their life satisfaction levels are like those of their heterosexual peers.

The significant difference in life satisfaction levels was instead found in Profiles 1 and 4. These profiles were composed by a significant proportion of, respectively, men and heterosexuals, and women and those who did not disclose their sexual orientation. This result suggests the coexistence of high life satisfaction and high heteronormativity for –mostly– men and heterosexuals, and the coexistence of high essentialism and low life satisfaction for women and those who do not disclose their sexual orientation.

In terms of undisclosed sexual orientation, our findings coincide with those by Powdthavee and Wooden (2015). These authors found that United Kingdom and Australian heterosexuals reported higher life satisfaction than those who "preferred not to say." Moreover, Habarth et al. (2019b) found that non-heterosexual women with stronger essentialist beliefs report lower well-being than heterosexual women, and this may be the case for non-heterosexual women in Profile 4. Nevertheless, the distinctions in life satisfaction here appear to be more prominent by gender rather than by sexual orientation, between a group significantly composed by men who adhere to heteronormativity (Profile 1) and a group significantly composed by women who adhere to essentialist sex and gender beliefs (Profile 4). For the latter group, essentialism may be contributing to perpetuate gendered beliefs that place women in a submissive status compared to men (Farvid, 2015). Essentialism may thus be linked to an increased risk of experiencing gender-based victimization, and this in turn can have a negative impact on their life satisfaction.

Another well-being variable that we included was perceived social support from family, friends, and relevant others. Previous research underscores that family support is fundamental for the development and subjective well-being of university students and emergent adults in general (Schnettler et al., 2015, 2017b; Barrera-Herrera and Vinet, 2017). Other studies on the topic that include sexual orientation show that heterosexual and non-heterosexual people engage differently with their families and receive differential benefits from their support (Goldberg et al., 2017; Hardy, 2019; McDermott et al., 2021). Our findings contribute to this body of research by associating levels of heteronormativity with degrees of family support, as university students with High heteronormativity (Profile 1) received higher family support than those with mixed heteronormativity (Profiles 3 and 4). Based on studies with LGBTQI+ youth and their family relations (Barrientos et al., 2021; McDermott et al., 2021), we hypothesize that university students with heteronormative attitudes will face less conflict with their families and will continue receiving emotional and material resources (e.g., shelter, encouragement, economic support).

For non-heterosexual young adults, the family is both a protective and a risk factor for their well-being. The literature is consistent in showing that these individuals receive less family support than their heterosexual peers (Orellana et al., 2022). However, in our study, students with Low heteronormativity (Profile 2), significantly composed by LGBQ and non-binary students, were statistically undistinguishable from the other three profiles in terms of family support. We propose two tentative explanations for this result. First, these students may experience an overall supportive family environment, with low heteronormativity as an associated condition, whether as an antecedent or a consequence. Second, these students exercise their agency and do an extensive emotion work to maintain harmonious family relationships, negotiating between heteronormative family discourses and their own sexual and/or gender identities (McDermott et al., 2021). This negotiation, which can include total or partial concealment of their non-normative identities, can be vital for LGBQ and non-binary students to maintain the support that their family provides.

Social support from friends also differed significantly between those with High heteronormativity and Low heteronormativity, while the mixed heteronormativity profiles reported statistically similar levels. Based on this result, we suggest that higher heteronormativity is associated with smaller friendship networks or support. Under a heteronormative logic, only certain types of relationships can occur between men and women (i.e., sexual and romantic relationships), hence cross-gender friendships are avoided or kept to a minimum to prevent sexual tension (Gillespie et al., 2015). Individuals may be prevented, and/or prevent their partners, from having friends of the "opposite gender" as heteronormative conceptions of cross-gender relationships are framed within sexual and romantic attraction. Furthermore, traditional masculinity roles limits men's possibilities to establish emotional relationships, particularly with other men (Ríos-González et al., 2021). Of note, however, individuals who are, or partner with, people of same-gender or multiple-gender attraction, can also have their same-gender and cross-gender friendships influenced by heteronormative expectations (Gillespie et al., 2015; Seal, 2019). Overall, heteronormativity can lead to deprioritize friendships, and other intimacy and emotional bonds outside the couple, and even frame these relations as a threat to the couple (Cronin, 2015). Previous studies have linked friendship relations to life satisfaction (Amati et al., 2018), and the role of heteronormativity in these links should also be explored in future research.

Lastly, for the third type of support examined in this study, those with Low heteronormativity also reported higher support from others, compared to people with mixed heteronormativity (Profiles 3 and 4). On the other hand, students with High heteronormativity were undistinguishable from the rest of the profiles regarding support from others. This finding may support the previous idea that individuals with Low heteronormativity are able to establish more emotional bonds outside traditional sources of support (friends, family) than those with mixed heteronormativity. However, there is still the question of why individuals with high heteronormativity report similar levels of this type of support, if they would be more constrained by gendered norms around relationships. The answer may lie in the type of relevant others that individuals such as those in Profile 1 (men, heterosexuals) and Profile 2 (LGBQ, non-binary) seek and the type of support these others provide. This is a question to explore in future research.

The last well-being indicator that we examined was self-perceived health, operationalized as the number of days in which participants experienced physical and mental health issues in the last month at the time of responding the questionnaire. There were no significant differences among profiles in the number of days with physical difficulties. For mental health difficulties, we found a high number for all groups, reporting between 15 to 19 out of 30 days with these difficulties. This is a concerning but unsurprising finding, considering the increase in mental health issues during the COVID-19 pandemic in both the general population and vulnerable groups (Orellana and Orellana, 2020; Barrientos et al., 2021). In our profiles, as it occurred with life satisfaction, we observed statistical differences between those with High heteronormativity (Profile 1) and those holding essentialist beliefs (Profile 4), with significantly fewer and more days of mental health issues, respectively. The composition of Profiles 1 and 4 again suggest that differences in self-perceived mental health relate to heteronormativity not only in terms of sexual orientation, but also gender. Habarth et al. (2019b) showed that heterosexual women with more strongly essentialist beliefs also reported lower depression. Our results expand on this phenomenon by showing that high heteronormativity is accompanied with –comparatively– better self-perceived mental health, particularly for those who fall within the acceptable boundaries of these norms (men, heterosexuals).

Profiles 2 and 3, significantly composed of LGBQ and non-binary students, did not differ from the rest of the profiles in terms of self-perceived mental health. Most studies on health by sexual orientation in adults from developed countries indicate that non-heterosexual individuals experience more mental health difficulties than heterosexual ones, with more marked distinctions between bisexual and heterosexual people (Meyer, 2003; Powdthavee and Wooden, 2015; Przedworski et al., 2015; Perales, 2019). Moreover, Habarth et al. (2019b) found that non-heterosexual women who endorsed normative behavior –characteristics found in Profile 3– reported lower psychological well-being (i.e., autonomy, growth, sense of purpose). Our findings do not support this evidence, but they align with a study with Portuguese high school students which showed that LGB and heterosexual participants had similar mental health levels (Fonseca de Freitas et al., 2021). Hence, besides heteronormative attitudes, factors related to culture, life period, and the COVID-19 pandemic may be operating in these mixed results regarding mental health.

Limitations and future research

This study is not without limitations. First, our sample was self-selected and non-probabilistic, from a region in Southern Chile characterized by a conservative culture, compared to other regions of the country. We cannot generalize these findings to the national population of university students, nor at a larger level. A second limitation is that responses may have been driven by conditions related to the COVID-19 pandemic (e.g., confinement in the family home, suspension of in-person classes and activities in campus). These conditions were not assessed in this study, and our data does not provide information to infer the impact of the pandemic in these responses compared to pre-pandemic times. Another limitation is that we did not differentiate students in our profiles by gender identity, that is, between cisgender and transgender participants. The latter category can include non-binary identities, but these were identified as a gender category rather than as gender identity (see Participants). We have highlighted gender identity processes alongside sexual orientation in this paper whenever applicable (e.g., disclosure), and we established that all transgender and non-binary participants in our sample were also non-heterosexual. Nevertheless, heteronormativity also encompasses prejudice and beliefs about transgender and non-binary people to privilege a cisgender worldview (i.e., cisgenderism). Distinguishing gender identity in these profiles would have provided a richer understanding of how transgender and non-binary students experience heteronormativity and how it relates to their well-being.

Another limitation is that the measure of self-perceived mental health consisted of only one item, and its response depended on the person's interpretation of what mental health entails. This is a limitation particularly regarding male participants, who may be more constrained by traditional masculinity expectations to present themselves—intentionally or unintentionally—as "mentally strong," or to fail to conceptualize certain experiences as part of the mental health continuum (e.g., see Seal, 2019 on masculinity as an isolating experience). Nevertheless, the number of days reported by this group was still concerning (15 out of 30 days) and it requires further attention as the pandemic progresses. On its part, the measure of heteronormativity might also be prone to social desirability bias and not fully encompass dimensions that are relevant for certain participants (e.g., heterosexual women, Habarth et al., 2019b). Thus, this scale may not capture heteronormativity aspects that may be more strongly associated with well-being.

Future research with university students should include samples with probabilistic distributions across gender, faculty, and area of residence, to test the number and configuration of profiles found here. Future studies should also expand on the measures of well-being, conditions during and after the pandemic, and control for social desirability in the responses to the heteronormativity scale. The manifestations and outcomes of heteronormativity should also be further examined both in relation to discrimination, and in samples of gay, lesbian, bisexual, trans, intersex, and other queer people; we also advise that these groups are examined separately. Heteronormativity is made up by dispositional, attitudinal, relational, and structural assumptions, and belonging to stigmatized groups does not grant immunity from heteronormative beliefs and behaviors. Studies on heteronormativity in LGBQ populations will also benefit from analyzing links between this construct and internalized homophobia, and sexual double standards (i.e., higher internalized homophobia may be associated with higher heteronormativity, and with stronger double standards). Lastly, heteronormativity studies will benefit from including other personal and sociodemographic characteristics (e.g., ethnicity, religion, socioeconomic status) to offer an intersectional approach to how heteronormativity and its two dimensions are experienced by individuals based on their multiple identities and diverse life experiences.

Research and practical implications

The empirical testing of heteronormativity is a relatively recent endeavor in psychological research, and thus its measurement may not yet encompass all relevant factors of this construct. The first implication from this study for research on heteronormativity is to continue exploring the connection between Habarth's (2014) construct of heteronormativity and other variables besides sexuality and gender (Seal, 2019). Heteronormativity imposes regulations not only on the attraction, gender and gender expression of the person and their partner (s), but also their age, socioeconomic status, ethnicity, nationality, religion, disabilities, among others (Maldonado-Ramírez, 2015).

Among these variables, family dynamics is perhaps the most immediate issue because the idea of family is indivisible from "doing gender" and "doing sexuality" (Goldberg et al., 2017). The focus on family is of special relevance in Latin American cultures, where social institutions reinforce heteronormativity by priming "opposite but complementary" social roles of men and women in a family unit (see Vergara, 2020). Emergent adults are developing their life trajectory (Nelson, 2020), and heteronormative discourse and behaviors, in both the family (Pollitt et al., 2021) and in higher education (Seal, 2019), can permeate this trajectory. LGBTIQ+ emergent adults can also adhere to heteronormativity, for instance, by adopting heteronormative behaviors to conceal their sexual orientation or gender identity for their safety, or by internalizing assumptions about what constitutes an ideal family and whether it is attainable to them as members of a marginalized group (Pollitt et al., 2021).

There are also valuable research avenues in accounting for the presence of heterosexuals and men in Profiles 2, 3 and 4. Seal, (2019) has underscored that heterosexuality is needed to challenge heteronormativity (e.g., by rendering itself visible). Therefore, identifying further characteristics and experiences of heterosexuals—specially men—with low or mixed heteronormativity can be a gateway to understanding how to increase acceptance of LGBTQI+ people in all life spheres.

This study also has practical implications. Each of the four profiles suggests patterns of heteronormative beliefs that will have a differential impact in students' well-being. Based on our findings and on previous literature, those students with high heteronormativity are more likely to endorse a hierarchical system of sexual value –an understanding what is normal and what is deviant for sexuality and gender–, and act accordingly to participate in this system (Maldonado-Ramírez, 2015; Wilson, 2022), and stigmatize, harm, and exclude those who threaten it (Ray and Parkhill, 2021; Corlett et al., 2022). Higher education institutions must examine how their discourses and curricula are informed by a heteronormative point of view (see Alarcón et al., manuscript under review; Seal, 2019). Even in progressive environments, these viewpoints can frame non-heterosexual and transgender/non-binary gender identities, at best, as benign deviations from the norm.

Moreover, the patterns of well-being variables linked to heteronormativity can suggest focus points for policies, resources, and services that universities can offer (i.e., health services, student societies) to enhance protective factors for students' well-being. These resources can be particularly beneficial for students resembling those in profiles with low or mixed heteronormativity, who may also be at a social disadvantage due to their gender or sexual orientation (women and non-binary people, non-heterosexuals). Nevertheless, changes in the social environment have been found to be insufficient to decrease minority stress (Meyer et al., 2021). Therefore, higher education institutions should seek to enhance well-being factors (e.g., increasing support resources for students) alongside cultural and curricular changes regarding sexuality and gender norms (Meyer et al., 2021).

Conclusion

The four profiles found in this study highlight the need to approach heteronormativity using an intersectional framework. This approach is needed because this construct can manifest in a myriad of ways that depend on the person's individual characteristics, immediate context, and their social environment. Furthermore, while high heteronormativity appears to coexist with protective factors in our study, the ramifications of heteronormativity are harmful for all people (Seal, 2019). Farvid (2015) states that people who adhere to heteronormativity might show better psychological adjustment, but these beliefs sustain gender stereotypes and power relationships that facilitate discrimination, gender inequality and sexual violence (see Wilson, 2022). Expectations regarding gender and sexual orientation affect those who transgress these norms the most, but rarely any individual will consistently satisfy all these expectations (Habarth, 2014). These profiles suggest research directions to better understand the health and social disadvantages faced by both those who question heteronormativity and those who endorse it.

Data availability statement

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

Ethics statement

The studies involving human participants were reviewed and approved by Comité Ético Científico de la Universidad de La Frontera. The patients/participants provided their written informed consent to participate in this study.

Author contributions

LO and BS conceptualized and designed the study, and performed the statistical analysis. LO and TA collected the data and wrote the first draft of the manuscript. TA organized the database. All authors have read, revised, and approved the final version of the manuscript.

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Conflict of interest

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

Publisher's note

Supplementary material

The Supplementary material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.988054/full#supplementary-material

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Sexual double standard: A gender-based prejudice referring to sexual freedom and sexual shyness

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The sexual double standard (SDS) consists of judging men and women differently for the same sexual behavior. This study contributes to research on the factors that determine inconsistent adherence to the SDS. It uses a descriptive methodology to analyze the association between individual and contextual factors both with adherence to the SDS, and with four SDS adherence typologies (man-favorable SDS, woman-favorable SDS, egalitarian and ambivalent). A total of 1,206 heterosexual Spanish adults (603 men and 603 women) participated. The mean age in the male sample was 41.7 (*SD*=14.25), in the female sample *M*=40.84 (*SD*=14.24). The results show that the conceptualization of SDS as a gender-based prejudice is valid to understand the bias of ingroup favoritism that SDS implies: adherence to SDS is more related to the identity of the gender role of men (vs. women). In addition, evidence is provided that the normative context and domain of sexual behavior (i.e., sexual freedom or sexual shyness) determine the form that SDS adopts to express itself. The domain of behaviors related to sexual shyness (vs. domain related to sexual freedom) better discriminates between the different four SDS adherence typologies. The importance of adopting different levels of analysis (i.e., individual, intergroup, societal) to explain and predict both SDS adherence and the prevalence of SDS adherence typologies is discussed.

KEYWORDS

sexual double standard, gender-based prejudice, sexual gender norms, sexual freedom, sexual shyness

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Introduction

The Sexual Double Standard (SDS) occurs when similar sexual behaviors are evaluated differently depending on whether a man or a woman performs them (Milhausen and Herold, 2002). Non-adherence to SDS implies an egalitarian gender attitude regarding sexuality. In this case, the evaluation of sexual behavior is independent of who (i.e., a man or a woman) exhibits them.

Some authors have proposed that SDS is a contextual phenomenon, as results support its existence only on certain occasions (Zaikman and Marks, 2014). For example, although the measure of SDS through self-report shows that most people report being egalitarian, different SDS adherence typologies still prevail (Álvarez-Muelas et al., 2021b). Furthermore, measures with the Implicit Association Test (IAT; Greenwald et al., 2009) show that the traditional attitude towards SDS is automatically activated (Marks, 2008; Jonason and Marks, 2009; Kreager and Staff, 2009). Therefore, it is necessary to study the factors that influence or relate to the inconsistency that characterizes the adherence to SDS. We propose that a relevant factor in this inconsistency is the domain of sexual behaviors to which the scale used to measure SDS refers.

Adherence to SDS and domains of sexual behavior

Traditionally, SDS has been measured concerning the domain of sexual behaviors related to the exercise of sexual freedom. Adherence to SDS relative to this area reflects the degree to which the respondent recognizes and agrees that freely and openly exercising sexuality is equally desirable or beneficial for both men and women (Álvarez-Muelas et al., 2021b). Support for the so-called traditional SDS values the free and active expression of sexuality more positively in men than in women (Zaikman and Marks, 2017). In this sense, we can affirm that the prevalence of traditional SDS implies an attitude that values sexual freedom in favor of men (i.e., man-favorable SDS). However, the reverse sexual double standard, which values high sexual activity more positively in women than in men (Milhausen and Herold, 1999), implies a woman-favorable SDS.

Recently, SDS has been measured in the domain of sexual behaviors related to sexual shyness (Sierra et al., 2018; Álvarez-Muelas et al., 2021b, 2022). In this case, adherence to SDS measures to the extent to which the respondent recognizes and approves, for both men and women, the willingness and desire to manifest decorum, chastity, and continence in sexual relations (Álvarez-Muelas et al., 2021b). In the dimension related to sexual shyness, a man-favorable SDS consists in assessing sexual shyness more positively in women than in men. We consider that such a form of adherence to SDS expresses gender-based prejudice, as in democratic societies, since the mid-20th century, there is increasing agreement on the right to free expression of sexuality and premarital sex (King et al., 1977; Wells and Twenge, 2005).

This study aims to contribute to the understanding of the factors that favor the variability with which adherence to SDS manifests. To this end, we propose that SDS is a gender-based prejudice that involves a biased and negative group evaluation (e.g., women) or an individual (e.g., a particular woman) based on her group membership (i.e., the women's collective) (Crandall et al., 2002). Notice that as it usually happens with expressions of modern prejudice (Pearson et al., 2009), SDS might adopt an ambivalent expression (Álvarez-Muelas et al., 2021b). When an attitude is ambivalent the person has both pro and con beliefs, or positive and negative emotions when evaluating sexual behavior in men and women (Albarracín et al., 2014).

Intergroup gender relations and adherence to SDS

Conceptualizing SDS as a gender-based prejudice justifies an analysis of its adherence and prevalence within the framework of intergroup relations between men and women. From this perspective, men and women self-perceive themselves as members of a social group with which they share the same social identity (Turner and Reynolds, 2011). When the man vs. woman categorization becomes salient, both men and women interact in terms of their social identity (Turner et al., 1987), and this social identity will tend to accentuate differences between the ingroup and outgroup on dimensions of comparison that are relevant (Jetten and Spears, 2003). There is evidence that men differentially characterize the ingroup through comparison with women and that positive own group differentiation (i.e., ingroup favoritism bias) predicts sexism against women (Gómez-Berrocal et al., 2011). Therefore, the analysis of SDS adherence in an intergroup context involves testing whether the comparison with the outgroup (e.g., women) on dimensions of sexual behavior (e.g., dimensions related to sexual freedom or sexual shyness) yields favoritism toward one's own group (e.g., men).

The existence of SDS has been questioned on the grounds that gender differences are scarce for many sexual behaviors and attitudes (Petersen and Hyde, 2010). Related to this issue, it is important to consider what beliefs the respondent is relying on to make their judgements. The categories "male" and "female" will be those that relate to responses to an SDS scale if the respondent makes judgments based on biological differences between men and women (Buss, 2006; Endendijk et al., 2020). However, the respondent may also understand that men and women are biologically the same, but different in the sex roles they perform (Herek, 1986; Klein et al., 2019). In this case, gender role-based categories (i.e., masculine, feminine, androgynous, and undifferentiated; Bem, 1974) will determine responses to a scale assessing SDS. From this approach, it is vital to explore under what conditions the SDS measure will yield differences across gender role or across man and woman categories.

On the other hand, the form that adherence to SDS takes-for example, when it assumes a man-favorable bias-may reinforce the traditional gender hierarchy that reserves decision-making power and assertiveness for men, and passivity for women (Christopher and Wojda, 2008; Rosenthal et al., 2012). Social dominance orientation (Pratto et al., 1994; Sibley et al., 2007; Asbrock et al., 2010) describes an individual characteristic that reflects a general preference for hierarchy (vs. egalitarian relationships) among groups living together in a society (Pratto et al., 1994). Previous studies have linked social dominance orientation to hostile sexism toward women (Sibley et al., 2007) and to SDS adherence that is favorable to men (Sierra et al., 2018; Gómez-Berrocal et al., 2019). Thus, we postulate that this dispositional characteristic will predict the forms of SDS adherence that favor traditional gender hierarchy.

Contextual factors and SDS adherence

Twelve European countries already have laws to guarantee the right to sexual freedom and equality for men and women. This situation may inhibit adherence to SDS if we consider that the normative context determines the prevalence of and individual adherence to any prejudicial attitude (Crandall et al., 2002). In this regard, it has been found that the SDS adherence typologies (man-favorable SDS, woman-favorable SDS, and egalitarian) vary depending on the cultural and normative context. For example, in societies with strong democracies, the prevalence of the egalitarian typology is high (Sánchez-Fuentes et al., 2020; Álvarez-Muelas et al., 2022). Even the mere perception that one has about the consensus that supports antiprejudice norms (i.e., perceived normativity) can have an effect on personal adherence to prejudice (Sechrist and Stangor, 2001; Stangor et al., 2001). For example, perceived normativity about social support for SDS has been related to individual attitude toward SDS (Gómez-Berrocal et al., 2019).

The normative context that favors openness and sexual liberation has been assumed to be determinant in understanding the observed reduction in adherence to traditional SDS (Thompson et al., 2018). In the context of democratic societies, we assume that the norm advocating openness and the right to sexual freedom (i.e., acceptance of sexual freedom) coexists with another norm-advocating sexual equality between men and women (i.e., the norm of non-adherence to SDS). Attitudes toward sexual freedom in general (e.g., acceptance of sexual freedom) will make the modern vs. old-fashioned categorisation salient, and attitudes toward sexual equality between men and women will salience gender categorization (i.e., man vs. woman) and probably competition intergroup (Ellemers and Haslam, 2011; Turner and Reynolds, 2011). From this approach, we expect that there will be no differences between men and women in responses to a scale that generally measures acceptance of sexual freedom. However, there will probably be differences between men and women in responses to a scale measuring SDS, as such a scale may capture motivation towards ingroup distinctiveness through ingroup favoritism (Tajfel and Turner, 1986; Dovidio and Gaertner, 2010).

On the other hand, the domain of sexual behavior (i.e., sexual freedom and sexual shyness) concerning the measures of SDS is a determinant factor of the variability shown by SDS. In order to describe the prevalence in Spain of different forms of SDS adherence in relation to both sexual freedom and sexual shyness, Álvarez-Muelas et al. (2021b) found that the percentage of people with an egalitarian standard was higher in the domain of behaviors related to sexual freedom compared to in the domain of behaviors related to sexual shyness. Adherence to prejudice is more subtle and more politically correct when it implies an ingroup favoritism bias on positive dimensions or domains (i.e., that society does not censor) but not on negative dimensions or domains (i.e., that society censors; Dovidio et al., 2016). It seems logical to assume that in democratic societies, gender equality will be frowned upon, even censored, when it refers to behaviors related to sexual freedom. However, there is no clear normative context in the sexual shyness area. It is therefore crucial to know whether the SDS expression concerning the area of sexual shyness represents a more subtle form of prejudice in the context of sexual openness that characterizes democratic societies.

Finally, the need to maintain gender differences is likely to change over the individual's evolutionary development. The evidence shows that people in different age groups express a favourable attitude towards the sexual double standard: adolescents (Monge et al., 2013), young adults (Sakaluk and Milhausen, 2012), and over 50 years old (Sierra et al., 2010). In non-English speaking samples, people older than 50 years old have been found to report higher mean scores in adherence to SDS in favor of men (Sierra et al., 2018). However, men aged 26–55 years and women older than 56 (Álvarez-Muelas et al., 2021b) entail the highest percentage of people supporting man-favorable SDS.

Against this background, the main objective of this article is to describe the processes associated with the expression of adherence to SDS. Two hypotheses and three research questions are proposed.

> *H1*: SDS is a gender-based prejudice that reflects motivations to achieve a positive gender identity for the ingroup (Tajfel and Turner, 1986). Adherence to SDS is expected to be a result of the interaction between gender (i.e., men vs. women) and gender role (i.e., masculine, feminine, androgynous, and undifferentiated).
>
> *RQ1*: Are acceptance of sexual freedom and acceptance of sexual shyness associated with the respondent's gender and gender role?
>
> *RQ2*: How is acceptance of sexual freedom and sexual shyness associated with the forms that adherence to SDS takes (man-favorable SDS, woman-favorable SDS, egalitarian, and ambivalent)?
>
> *H2*: It is expected to find a significant correlation between adherence to SDS and the perceived normativity on sexual gender roles. Individual adherence to SDS will be lower if the social environment is perceived not to support SDS.

> *RQ3*: To what extent do individual (i.e., sex, age, gender role, and social dominance orientation) and contextual (i.e., perceived normativity of sexual gender norms) factors explain the types of SDS adherence (i.e., man-favorable SDS, woman-favorable SDS, egalitarian, and ambivalent) in the domains of sexual freedom and sexual shyness?

Materials and methods

Participants

The sample was composed of 1,206 individuals who fulfilled the following criteria: (a) aged ≥18 years; (b) Spanish nationality; and (c) heterosexual. Participants were recruited from the general Spanish population. A quota convenience sampling method was used to obtain the required number of men ($n = 603$) and women ($n = 603$), whose mean age was 41.7 ($SD = 14.25$) for men and 40.84 ($SD = 14.24$) for women. Most of the participants had a university degree and were in a relationship. To fulfill the goals of the present study, the sociodemographic information of the participants is shown based on the four SDS adherence typologies (man-favorable SDS, woman-favorable SDS, egalitarian, and ambivalent),on both sexual freedom and sexual shyness in Table 1, and on gender roles (masculine, feminine androgynous, and undifferentiated) in Table 2. In terms of gender roles, men identified more with a masculine role compared to women, who defined themselves as more feminine. Finally, more men than women characterized themselves as having an undifferentiated role.

Instruments

Socio-demographic questionnaire. It includes questions about gender (i.e., man vs. woman), age, nationality, sexual orientation, education, and partner relationship among others.

The Spanish version of the Sexual Double Standard Scale (Muehlenhard and Quackenbush, 2011; Sierra et al., 2018). It consists of 16 items with a 4-point Likert-type response scale from 0 *(strongly disagree)* to 3 *(strongly agree),* which are structured into two factors of 8 items each: Acceptance of sexual freedom and Acceptance of sexual shyness. The eight items for each factor are written in parallel: four refer to sexual behaviors attributed to men and four to sexual behaviors attributed to women. From the response to the items of each factor, an index of adherence to the SDS can be obtained. The Index of Double Standard for Sexual Freedom is obtained from the Acceptance of sexual freedom factor and is the result of subtracting from the score in the four items referring to men the score in the four items referring to women. Similarly, the Index of Double Standard for Sexual Shyness is obtained from the factor Acceptance of sexual shyness and is the result of subtracting from the score in the four items referring to women the score in the four items referring to men. The Index of Double Standard for Sexual Freedom and the Index of Double Standard for Sexual Shyness are bipolar measures, their scores range from −12 to +12, and a neutral score is equal to 0. In both indices, negative scores represent adherence to SDS in favor of women, and positive scores represent adherence to SDS in favor of men. Specifically, for the Index of Double Standard for Sexual Freedom, negative scores (−1 to −12) indicate adherence to a sexual double standard more in favor of

TABLE 1 Sociodemographic characteristics of the sample according to SDS adherence typologies for sexual freedom and sexual shyness.

	Typologies of SDS adherence for sexual freedom				Typologies of SDS adherence for sexual shyness			
	Man-favorable ($n = 369$)	**Woman-favorable ($n = 339$)**	**Egalitarian ($n = 420$)**	**Ambivalent ($n = 78$)**	**Man-favorable ($n = 388$)**	**Woman-favorable ($n = 287$)**	**Egalitarian ($n = 437$)**	**Ambivalent ($n = 94$)**
Gender								
Men (%)	64.2	38.6	47.1	47.4	64.9	41.5	43.7	43.6
Women (%)	35.8	61.4	52.9	52.6	35.1	58.5	56.3	56.4
Education								
No formal studies (%)	2.4	1.8	1.2	1.3	1.3	1.7	1.6	4.3
Primary education (%)	12.5	9.1	6.7	7.7	13.7	9.4	5.7	6.4
High school (%)	24.9	24.2	20	28.2	26.3	25.1	18.5	26.6
University degree (%)	59.1	64.6	71.7	62.8	58.5	62.7	73.7	61.7
In a relationship								
Yes (%)	78.3	76.1	76.4	74.4	77.8	79.1	74.122.7	77.7
No (%)	18.7	21.2	20.2	23.1	20.1	16.7		20.2

TABLE 2 Sociodemographic characteristics of the sample according to gender roles.

	Gender roles			
	Masculine ($n = 369$)	**Feminine ($n = 339$)**	**Androgynous ($n = 420$)**	**Undifferentiated ($n = 78$)**
Gender				
Men (%)	55.7	39.1	45.3	56.5
Women (%)	44.3	60.9	54.7	43.5
Education				
No formal studies (%)	0.4	3	0.9	2
Primary Education (%)	9.4	11.2	8.5	8.1
High school (%)	19.7	25.7	24.1	23.1
University degree (%)	69.3	59.9	66	66.4
In a relationship				
Yes (%)	74.2	79.3	76.9	76.5
No (%)	23	18.4	21.7	19.3

sexual freedom in women than in men; positive scores (+1 to +12) indicate adherence to an SDS more in favor of sexual freedom in men than in women. For the Index of Double Standard for Sexual Shyness, negative scores (−1 to −12) indicate adherence to a sexual double standard more in favor of sexual shyness in men than in women; positive scores (+1 to +12) indicate adherence to an SDS more in favor of sexual shyness in women than in men. From the Index of Double Standard for Sexual Freedom and Index of Double Standard for Sexual Shyness, four types of adherence to SDS are obtained: man-favorable SDS, woman-favorable SDS, egalitarian and ambivalent referred to sexual freedom and sexual shyness, respectively. The man-favorable SDS typology includes those people with positive scores (between +1 and + 12) on both indices. In the Index of Double Standard for Sexual Freedom, the man-favorable SDS typology represents supporting and defending greater sexual freedom for men than for women. The Index of Double Standard for Sexual Shyness represents supporting less sexual shyness for men than for women. The woman-favorable SDS typology is obtained from the scores that take a negative value on both indices (between −1 and − 12). In the Index of Double Standard for Sexual Freedom, the woman-favorable SDS typology represents defending greater sexual freedom for women than for men, while the Index of Double Standard for Sexual Shyness defends less sexual shyness for women than for men. The egalitarian typology includes those people whose score equals zero in either the Index of Double Standard for Sexual Freedom or Index of Double Standard for Sexual Shyness and, in turn, who obtain a zero result in the subtractions between the pairs of parallel items that make up either of these two indices. This typology includes those people who defend the same criterion for men and women alike when evaluating behaviors referring to both sexual freedom and sexual shyness. Finally, the ambivalent typology groups those people with a zero score in the Index of Double Standard for Sexual Freedom or Index of Double Standard for Sexual Shyness, and who obtain non-zero results in some items that make up either of these two indices. This typology includes those people who obtain inconsistent scores when evaluating sexual behaviors referring to sexual freedom or sexual shyness. The scale showed suitable internal consistency (ordinal alpha 0.84 for the Acceptance of the sexual freedom factor and 0.87 for the Acceptance of the sexual shyness factor), and its test–retest reliability coefficients were above 0.70 at 4 and 8 weeks (Sierra et al., 2018). It also proved to be invariant by gender and age (Álvarez-Muelas et al., 2019). In this study, the ordinal alpha values obtained were 0.79 and 0.82 for the Acceptance of sexual freedom, and 0.71 and 0.70 for the Acceptance of sexual shyness in men and women, respectively.

The Spanish version of Bem Sex Role Inventory (Bem, 1974; Fernández et al., 2007), the short version adapted by Gómez-Berrocal et al. (2022) is used. By means of eight items it assesses the gender role as a self-description according to a series of personality traits of the gender stereotype: four items represent the masculine dimension (e.g., behaves like a leader, has leadership abilities, dominant, and strong personality) and four items represent the feminine dimension (e.g., sensitive to needs of others, compassionate, gentle, and affectionate). The response scale is Likert-type from 1 (*never*) to 7 (*always*). The scores are used to obtain a Masculinity and a Femininity index, from which the person is classified as masculine, feminine, androgynous and undifferentiated according to the participants self-description in terms of the characteristics of both dimensions. The scale showed adequate internal consistency, with Cronbach's alpha coefficients of 0.84 for Masculinity and 0.75 for Femininity (Gómez-Berrocal et al., 2022). In this study, alpha coefficients were equal to 0.73 and 0.73 for Femininity in men and women, respectively, and 0.79 for Masculinity in both genders.

The Spanish version of Social Dominance Orientation Scale (Pratto et al., 1994; Silván-Ferrero and Bustillos, 2007). It consists of 16 items that are answered on a 7-point Likert scale from 1 (*completely disagree*) to 7 (*completely agree*), and two factors: Opposition to equality ($\alpha = 0.84$) and Group-based dominance ($\alpha = 0.77$) (Silván-Ferrero and Bustillos, 2007). In this study, ordinal alpha coefficients were 0.69 in men and 0.68 in women, and 0.76 in men and 0.74 in women for the two factors, respectively.

The Spanish hetero-referred version of Sexual Double Standard Scale (Muehlenhard and Quackenbush, 2011) by Gómez-Berrocal et al. (2019). It measures perceived normativity, that is, the perceived degree to which society accepts certain gender norms about sexual behaviors. The scale is composed of 18 items that are answered on a 4-point Likert-type scale, from 0 (*strongly disagree*) to 3 (*strongly agree*), and three factors: Social acceptance of man sexual shyness, Social acceptance of woman sexual freedom, and Social acceptance of sexual double standards. For each factor, internal consistency obtained ordinal alpha values of 0.73, 0.70 and 0.90, respectively. In our sample, the ranges of values were 0.67 and 0.69 in men and women for Social acceptance of man sexual shyness, 0.66 and 0.63 in men and women for Social acceptance of woman sexual freedom, and 0.75 and 0.66 for Social acceptance of sexual double standard.

Procedure

A nonrandom sampling procedure was applied to the general Spanish population to recruit the participants. Questionnaires were administered in paper and pencil format (84.2%) by two evaluators in different universities, social centers, and associations, and *via* an online format (15.8%). Regarding the paper and pencil format, participants completed the scales alone and in private, and returned them *via* a sealed envelope. Regarding the online format, the URL of the questionnaires was distributed through social networks and the news service of the University of Granada. Information on general sexual behaviors did not differ by questionnaire modality (Sierra et al., 2018; Álvarez-Muelas et al., 2021a). The subjects were informed of the purpose and procedure of the study. All participants were assured of the anonymity and confidentiality of the data. The time to complete the questionnaires was estimated at 30 min. This research was approved by the Ethics Committee of Human Research of the University of Granada, Spain.

Data analysis

To examine whether there were significant differences by gender and by gender roles, both indices of SDS adherence (i.e., Index of Double Standard for Sexual Freedom and Index of Double Standard for Sexual Shyness) and acceptance of sexual freedom and acceptance of sexual shyness we conducted MANOVA. Pairwise comparisons between the different gender roles were performed.

To examine differences in acceptance of sexual freedom and acceptance of sexual shyness by typologies of SDS adherence (man-favorable SDS, woman-favorable SDS, egalitarian, and ambivalent) we conducted univariate ANOVAs. To find out to what extent SDS adherence is related to perceived normativity about sexual gender roles, correlations were conducted between each factor of the hetero-referred scale of the SDS and the indices of SDS adherence. Since both indices are bipolar measures, correlations were conducted separately for negative scores (from −1 to −12) and for positive scores (from 0 to +12). For both indices, negative scores represent adherence with a woman-favorable SDS and positive scores represent adherence with a man-favorable SDS.

Finally, logistic regression analyses were conducted to determine the explanatory power of individual variables (i.e., sex, age, gender roles, opposition to equality and group-based dominance) and normative variables (i.e., social acceptance of man sexual shyness, social acceptance of woman sexual freedom, and social acceptance of sexual double standard) on the four typologies of SDS adherence (i.e., man-favorable SDS, woman-favorable SDS, egalitarian, and ambivalent) in two domains of sexual behavior (sexual freedom and sexual shyness).

Results

Adherence to SDS with respect to sexual freedom and sexual shyness: Differences across gender and gender role (H1)

Differences between men and women

We found significant differences between men and women for both the Index of Double Standard for Sexual Freedom ($p < 0.001$) and Index of Double Standard for Sexual Shyness ($p < 0.01$) scores. Regarding the first index, both men and women had positive scores, although they were higher in men; men reported ingroup favoritism and women outgroup favoritism. For the second index, men had positive scores and women had negative scores; therefore, both displayed ingroup favoritism (Table 3).

Differences by gender role

We only found significant differences in the men sample. All four gender roles had positive scores on both the Index of Double Standard for Sexual Freedom and Index of Double Standard for Sexual Shyness, which indicates ingroup favoritism. The significantly higher scores correspond to the masculine gender role category in the men's sample (vs. feminine, androgynous and undifferentiated). In the women's sample, no significant differences among gender role categories were found (Table 3).

Acceptance of sexual freedom and sexual shyness: Differences across gender and gender role (RQ1)

Differences between men and women

We do not find any differences between men and women regarding the acceptance of sexual freedom. As for the acceptance of sexual shyness, we see significant differences between men and

TABLE 3 Differences in Index of Double Standard for Sexual Freedom, Index of Double Standard for Sexual Shyness, Acceptance of sexual freedom and Acceptance of sexual shyness across gender and gender roles.

	Global		**Feminine**		**Masculine**		**Androgynous**		**Undifferentiated**			
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Gender roles**	**Gender**
	M (SD)	***M (SD)***	***M (SD)***	***M (SD)***	***M (SD)***	***M (SD)***	***M (SD)***	***M (SD)***	***M (SD)***	***M (SD)***	$F_{(3, 599)}$	$F_{(1, 1,204)}$
IDS-SF	2.27 (2.60)$_{a}$	1.42 (2.44)$_{b}$	1.80 (2.57)$_{a, b, c}$	1.43 (2.39)	2.93 (2.59)$_{a}$	1.66 (2.39)	2.47 (2.91)$_{b}$	1.52 (2.72)	2.07 (2.40)$_{c}$	1.14 (2.29)	1.09	34.13***
IDS-SS	0.62 (1.89)$_{a}$	−0.06 (1.42)$_{b}$	0.28 (1.52)$_{a, b}$	0.02 (1.37)	1.14 (2.46)$_{a}$	−0.27 (1.41)	0.56 (1.99)$_{b}$	0.13 (1.46)	0.54 (1.59)$_{a, b}$	−0.22 (1.45)	2.55	50.51***
A-SF	11.42 (4.65)	10.96 (4.95)	10.71 (5.09)$_{b}$	10.34 (4.92)$_{b}$	12.56 (4.12)$_{a}$	11.59 (5.08)$_{a}$	11.08 (5.21)$_{a, b}$	11.24 (5.44)$_{a, b}$	11.34 (4.27)$_{a, b}$	11.20 (4.40)$_{b}$	2.00	2.71
A-SS	6.89 (4.73)$_{a}$	5.99 (4.74)$_{b}$	6.77 (5.00)	5.98 (4.83)	7.07 (4.60)	5.53 (4.64)	7.21 (5.33)	6.12 (5.31)	6.73 (4.34)	6.22 (4.16)	0.47	11.10***

IDS-SF: Index of Double Standard for Sexual Freedom; IDS-SS: Index of Double Standard for Sexual Shyness; A-SF: acceptance of sexual freedom; A-SS: acceptance of sexual shyness. Different subscript letters indicate the groups that significantly differ within the male and female sample separately.
***$p < 0.001$.

women ($p < 0.001$): men were more in favor of sexual shyness than women (Table 3).

Differences by gender role

Regarding acceptance of sexual freedom, differences among gender roles were found only in the sample of men. The masculine gender role had higher scores in the men's sample (vs. feminine and undifferentiated role) for sexual freedom. Regarding acceptance of sexual shyness, we found no differences among roles neither in the sample of men nor in that of the women (Table 3).

Acceptance of sexual freedom and sexual shyness: Differences across SDS adherence typologies (RQ2)

Differences across SDS adherence typologies that relate to the domain of sexual freedom

Regarding acceptance of sexual freedom, participants with an egalitarian typology in the domain of sexual freedom scored significantly higher ($M = 11.72$) than those with a man-favorable SDS typology ($M = 10.74$; $p = 0.026$). Regarding acceptance of sexual shyness, participants with an egalitarian typology scored significantly lower ($M = 5.56$) than those with the man-favorable SDS ($M = 7.84$) and ambivalent typologies ($M = 7.31$; $p < 0.001$). In addition, participants with a man-favorable SDS typology viewed sexual shyness more favorably ($M = 7.84$) than those with a woman-favorable SDS typology ($M = 5.81$; $p \leq 0.001$; Table 4).

Differences across SDS adherence typologies that relate to the domain of sexual shyness

Regarding acceptance of sexual freedom, participants with an egalitarian typology scored significantly higher ($M = 12$) than those with a man-favorable SDS typology ($M = 10.34$; $p \leq 0.001$). Regarding acceptance of sexual shyness, participants with an egalitarian typology scored significantly lower ($M = 4.75$) than those with the man-favorable SDS, woman-favorable SDS, and ambivalent typologies ($p \leq 0.001$). Likewise, those who scored highest for acceptance of sexual shyness had a man-favorable SDS ($M = 7.66$; Table 4).

SDS adherence and perceived normativity regarding sexual gender roles (H2)

Regarding the relationship between perceived normativity and adherence to SDS (Table 5), perceived normativity regarding women's sexual freedom was negatively related to scores on the Index of Double Standard for Sexual Freedom ($r = -0.063$; $p = 0.033$) and the Index of Double Standard for Sexual Shyness ($r = -0.071$; $p = 0.016$). Perceived normativity about SDS was positively related to scores on the Index of Double Standard for Sexual Freedom ($r = 0.108$; $p = 0.001$) and the Index of Double Standard for Sexual Shyness ($r = 0.116$; $p < 0.001$). No significant correlation was found between perceived normativity and scores on the Index of Double Standard for Sexual Freedom and Index of Double Standard for Sexual Shyness.

Regression models by SDS adherence typologies (RQ3)

Sexual freedom domain

Table 6 provides the results of the regression models for sexual freedom. In the man-favorable SDS typology, variables with explanatory power included age ($B = 0.02$, $SE = 0.00$, $OR = 1.01$, $p < 0.001$) and group-based dominance ($B = 0.04$, $SE = 0.00$, $OR = 1.04$, $p < 0.001$), as well as one normative variable, i.e., social acceptance of SDS ($B = 0.02$, $SE = 0.01$, $OR = 1.02$, $p = 0.041$).

The variables with explanatory power for the woman-favorable SDS typology were two individual characteristics, specifically, gender ($B = 0.62$, $SE = 0.13$, $OR = 1.87$, $p < 0.001$) and age ($B = -0.01$, $SE = 0.00$, $OR = 0.98$, $p = 0.005$), and the social acceptance of SDS ($B = -0.03$, $SE = 0.01$, $OR = 0.96$, $p = 0.002$).

TABLE 4 Differences in sexual freedom and sexual shyness acceptance across SDS adherence typologies.

			Sexual freedom domain				Sexual shyness domain					
			Man-favorable ($n=369$)	Woman-favorable ($n=339$)	Egalitarian ($n=420$)	Ambivalent ($n=78$)			Man-favorable ($n=388$)	Woman-favorable ($n=287$)	Egalitarian ($n=437$)	Ambivalent ($n=94$)
	F	*p*	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*F*	*p*	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
A-SF	3.09	0.026	10.74 (4.37)$_{a}$	11.17 (4.42)	11.72 (5.51)$_{a}$	10.67 (4.09)	8.34	<0.001	10.34 (4.66)$_{a}$	11.08 (4.60)	12 (5.00)$_{a}$	11.37 (4.25)
A-SS	19.09	<0.001	7.84 (4.96)$_{a}$	5.81 (4.39)$_{a}$	5.56 (4.51)$_{a. b}$	7.31 (4.95)$_{b}$	19.09	<0.001	7.66 (4.69)$_{a}$	7.22 (4.29)$_{b}$	4.75 (4.80)$_{a.b.c}$	6.91 (3.82)$_{c}$

A-SF: Acceptance of sexual freedom; A-SS: Acceptance of sexual shyness. Different subscript letters indicate the groups that significantly differ.

TABLE 5 Correlations between the Index of Double Standard for Sexual Freedom and Index of Double Standard for Sexual Shyness with index of perceived normativity of sexual gender norms.

	AMSS	AFSF	ASDS
IDS-SF (0 a + 12)	0.008	−0.063*	0.108**
IDS-SF (−1 a − 12)	0.075	−0.066	0.044
IDS-SS (0 a + 12)	−0.025	−0.071*	0.116***
IDS-SS (−1 a − 12)	−0.02	−0.058	0.003

IDS-SF: Index of Double Standard for Sexual Freedom; IDS-SS: Index of Double Standard for Sexual Shyness; AMSS: normativity of man sexual shyness; AFSF: normativity of woman sexual freedom; ASDS: normativity of sexual double standard.
*$p<0.05$; **$p<0.01$; ***$p<0.001$.

The egalitarian typology was only predicted by negative scores for the individual characteristic of group-based dominance ($B=-0.03$, $SE=0.00$, $OR=0.97$, $p=0.0005$).

Finally, for the ambivalent typology, no variable had significant explanatory power.

Sexual shyness domain

Table 7 presents the results of regression models of sexual shyness. Regarding the man-favorable SDS typology, the personal variables with explanatory power were gender ($B=-0.84$, $SE=0.13$, $OR=1.43$, $p=0.001$; i.e., more men than women supported man-favorable SDS), age ($B=0.01$, $SE=0.00$, $OR=1.01$, $p=0.024$) and group-based dominance ($B=0.03$, $SE=0.00$, $OR=1.03$, $p<0.001$).

Regarding the woman-favorable SDS typology, the factors with explanatory power were gender ($B=0.49$, $SE=0.14$, $OR=1.63$, $p=0.000$) and social acceptance of man sexual shyness ($B=0.06$, $SE=0.03$, $OR=1.06$, $p=0.045$).

Regarding the egalitarian typology, the personal variables with explanatory power were gender ($B=-0.29$, $SE=0.12$, $OR=1.34$, $p=0.017$) and group-based dominance ($B=-0.03$, $SE=0.00$, $OR=0.96$, $p=0.000$).

Discussion

The Sexual Double Standard (DSP) consists of evaluating similar sexual behaviors differently depending on whether they are carried out by a man or a woman (Milhausen and Herold, 2002). Accumulating research indicates that studying the prevalence of SDS is not a trivial issue. Among the factors that hinder the evaluation of its existence, the relationship between adherence to SDS and the cultural and normative context has been pointed out (Zaikman and Marks, 2014; Habarth et al., 2019), likewise, the results on the prevalence of SDS depend on the theoretical framework and the methodology adopted by the researcher (Endendijk et al., 2020). However, equality between men and women in the field of sexuality has not yet been fully achieved. This research analyzed the association between SDS adherence and various SDS adherence typologies (man-favorable SDS, woman-favorable SDS, egalitarian, and ambivalent) with factors of individual (i.e., gender, gender role, social dominance orientation, and age) and contextual nature (i.e., perceived normativity about gendered sexual norms and domains of sexual behavior: sexual freedom and shyness). To this end, we postulate that SDS is a gender-based prejudice in the domain of sexual behaviors related to sexual freedom and sexual shyness.

Based on the assumption that men's and women's evaluation of sexual behavior (e.g., the measure of SDS) may reflect motivations to achieve positive differentiation from the ingroup compared to the outgroup (Tajfel and Turner, 1986), we analyzed differences across gender (i.e., man vs. woman) and gender role (i.e., masculine, feminine, androgynous, and undifferentiated) on an SDS measure related to the domain of sexual freedom and sexual shyness (H1). The results showed significant differences between men and women, but both men and women rated sexual freedom more positively in men than in women. That is, on the Index of Double Standard for Sexual Freedom measure men expressed ingroup favoritism and women expressed outgroup

TABLE 6 Hierarchical logistic regressions of predictors of the SDS adherence typologies referring to the sexual freedom domain.

	Predictor	*B*	*SE (B)*	*OR*	*p*	95% CI for OR	χ^2	Nagelkerke R^2
Man-favorable	Gender	−0.75	0.13	0.47	0.000	0.36–0.60	77.57***	0.088
	Age	0.02	0.00	1.01	0.000	1.01–1.03		
	Group-based dominance	0.04	0.00	1.04	0.000	1.02–1.05		
	Normativity of acceptance of sexual double standard	0.02	0.01	1.02	0.041	1.00–1.04		
Woman-favorable	Gender	0.62	0.13	1.87	0.001	0.36–0.89	42.91***	0.050
	Age	−0.01	0.00	0.98	0.005	0.97–0.99		
	Normativity of acceptance of sexual double standard	−0.03	0.01	0.96	0.002	−0.05–−0.01		
Egalitarian	Group-based dominance	−0.03	0.00	0.97	0.000	0.96–1.40	20.93***	0.024
Ambivalent								

Only significant predictors are included in the table. OR: odds ratio; CI: confidence interval.
***$p < 0.001$.

TABLE 7 Hierarchical logistic regressions of predictors of the SDS adherence typologies referring to the sexual shyness domain.

	Predictor	*B*	*SE (B)*	*OR*	*p*	95% CI for OR	χ^2	Nagelkerke R^2
Man-favorable	Gender	−0.84	0.13	0.43	0.000	0.33–0.55	70.96***	0.080
	Age	0.01	0.00	1.01	0.024	1.00–1.02		
	Group-based dominance	0.03	0.00	1.03	0.000	1.01–1.04		
Woman-favorable	Gender	0.49	0.14	1.63	0.000	1.24–2.14	19.01**	0.023
	Normativity of acceptance of man sexual shyness	0.06	0.03	1.06	0.045	1.00–1.12		
Egalitarian	Gender	−0.29	0.12	1.34	0.017	1.05–1.71	45.23***	0.050
	Group-based dominance	−0.03	0.00	0.96	0.000	0.95–0.98		
Ambivalent								

Only significant predictors are included in the table. OR: odds ratio; CI: confidence interval.
**$p < 0.01$; ***$p < 0.001$.

favoritism. This result is consistent with the postulates of social identity theory according to which ingroup favoritism bias is a strategy for ingroup differentiation more prevalent in high-status groups (Tajfel and Turner, 1986; Rubin and Hewstone, 2004). In the SDS measure of sexual shyness (Index of Double Standard for Sexual Shyness), we found differences between men and women too, but in this case, both showed ingroup favoritism. In women, this ingroup favoritism may be because they consider the hierarchy implied by SDS in behaviors related to sexual shyness to be illegitimate and unstable.

The male sample was the only one exhibiting differences across gender roles on the two measures of SDS (i.e., Index of Double Standard for Sexual Freedom and Index of Double Standard for Sexual Shyness). Men with any gender role type (masculine, feminine, androgynous, and undifferentiated) support SDS with an ingroup favoritism bias on both sexual freedom and sexual shyness behaviors. In addition, masculine-role in men is the most strongly expressing ingroup favoritism. The result is consistent with previous studies showing that men's identification with the traditional masculine role was related to the tendency to maintain the position of privilege in the social hierarchy (Herek, 1986; Vandello and Bosson, 2013). The joint result obtained for men and women seems to coincide with that of other studies showing that gender-based prejudice is more strongly related to men's gender self-esteem than to women's (Falomir-Pichastor and Mugny, 2009).

We posited that the norm of acceptance of sexual freedom is probably insufficient to explain the reduction in SDS adherence (Thompson et al., 2018). We assume that the acceptance of sexual freedom, unlike SDS adherence, need not activate social gender categorization and, by the same token, neither does ingroup differentiation motivation (Tajfel and Turner, 1986; Ellemers and Haslam, 2011). To test this assumption we explored differences by gender and gender role in responses to a measure of acceptance of sexual freedom and to another of sexual shyness (RQ1). Our results showed no differences between men and women on acceptance of sexual freedom. This outcome indicates that attitude toward sexual freedom, unlike adherence to SDS in the domain of sexual freedom, is not biased by a motivation for ingroup distinctiveness. Men expressed significantly greater agreement with acceptance of sexual shyness than women. Differences by gender role were only found in men for acceptance of sexual freedom, where those with masculine roles reported more agreement with sexual freedom. Therefore, in light of the results derived from RQ1, we underscore the importance of analyzing SDS inconsistency in its intergroup and normative context. Although this study is descriptive and exploratory, it seems to show that the interpretation of ideologies enacting sexual openness depends on the intergroup context, in line with previous studies. Hence, the consequences that ideology has on intergroup attitudes, e.g., adherence to SDS, may adopt a diverse pattern (Guimond et al., 2013; Falomir-Pichastor et al., 2017).

While democratic societies may support the free exercise of sexuality, there are no similar norms regarding sexual shyness. In this regard we explored the pattern of response to acceptance of sexual freedom and acceptance of sexual shyness across types of SDS adherence (i.e., man-favorable SDS, woman- favorable SDS, egalitarian, and ambivalent; RQ2). Acceptance of sexual freedom discriminated less between types of SDS adherence than acceptance of sexual shyness. In fact, differences were found between the four SDS adherence typologies of the two domains of sexual behavior (sexual freedom and sexual shyness) in the responses to acceptance of sexual shyness. These results confirm that the dimension of sexual behaviors related to demureness discriminates better between the different forms that SDS can take, perhaps because there is no clear normative context regarding this domain of sexual behaviors (Dovidio and Gaertner, 2004; Dovidio et al., 2016).

We assume that the normative context determines individual adherence to any prejudiced attitude (Crandall et al., 2002). Thus, we described the relationship between adherence to SDS related to sexual freedom and sexual shyness and perceived normativity about sexual gender norms (H2). The results show that when the normative social context sanctions SDS (e.g., upholding women's sexual freedom), the adherence to SDS that preserves the heteronormative pattern is inhibited (e.g., supporting more sexual freedom or less sexual shyness for men than for women). Likewise, when the normative social context endorses SDS, adherence to SDS that preserves the heteronormative pattern is favored. However, sexual gender norms are not related, at least in this sample, to adherence to what some authors have called "reverse SDS" (see Milhausen and Herold, 2002), that is, advocating more freedom or less sexual shyness for women than for men. Altogether, the results indicate that sexual gender norms appear to be related only to adherence to SDS that favors men.

Finally, we explored the explanatory power of some factors of an individual nature (i.e., gender, gender role, social dominance orientation, and age) and others of a contextual nature (i.e., normativity about sexual gender norms) on the types of SDS adherence (man-favorable SDS, woman-favorable SDS, egalitarian, and ambivalent) related to sexual freedom and sexual shyness (RQ3).

The man-favorable SDS typology, in the domain of behaviors related to sexual freedom, was explained by both individual and normative factors. Adherence to this typology is greater (1) in men than in women, (2) in the elderly than in the youth, (3) in those scoring higher in disposition to group-based dominance, and (4) as the perceived normativity of SDS increases. In the sexual shyness domain, the individual explanatory factors for the man-favorable SDS typology were the same, but no normative factor predicted man-favorable SDS.

The woman-favorable SDS typology, in the domain of behaviors related to sexual freedom, was explained by individual and normative factors. It is advocated by more women than men, its adherence is greater as the age of the participant decreases and the perceived normativity of SDS decreases. Regarding the behaviors related to sexual shyness, woman-favorable SDS is advocated by more women than men and its adherence is higher as the perceived normativity on the acceptance of sexual shyness in men increases.

The egalitarian typology, both in the domain of sexual freedom and sexual shyness behaviors, was negatively explained by an individual factor: the disposition to group-based dominance. In addition, gender predicted an egalitarian attitude toward sexual shyness, that is to say, more women than men support this typology.

Overall, the results derived from RQ3 allow us to draw several conclusions. First, it is important to study the forms of SDS adherence from different levels of analysis (Murray, 2000), as factors of a diverse nature predict different adherence forms to SDS. In addition, the sexual behaviors scope on which SDS evaluates relates to the predictors of the SDS typologies. Second, social norms determine the expression of SDS mainly in the domain of behaviors related to sexual freedom, suggesting that new forms of SDS adherence may be emerging in the sexual shyness domain. Furthermore, the results suggest the importance of analyzing sexual gender norms as an antecedent factor of heteronormative scripts that support gender-based prejudice (Habarth et al., 2019). Third, gender was found to be a predictor of all forms of SDS adherence, except for the egalitarian typology in the sexual freedom domain. The predictive ability of gender can be interpreted as showing that SDS is a gender-based prejudice whose support implies some motivation to favour the ingroup. Fourth, as age increases, man-favorable SDS prevails more, both in behaviors related to sexual freedom and shyness, and a lower prevalence of SDS in favor of women. The age variable implies more than a demographic variable indicative of the evolutionary stage of the person, as it also reflects cultural gender socialization (Donnelly and Twenge, 2017). The participants in this study, all Spaniards, had a mean age of around 40 years, that is, born in the late 1970s. However, the standard deviation of the sample ($SD = 14$) indicates that they were born between 1963 and 2000, a period during which Spain experienced a profound cultural transformation in values and norms regarding gender relations.

Limitations and future research directions

Some of the main strengths of this study were the characteristics of the sample, for instance, it was recruited from the general Spanish population and represented both genders, different age groups and educational backgrounds. Second, we used reliable and valid measures that were adapted specifically for the population from which our sample was drawn.

One limitation of this study is the descriptive methodology used. The total size of the sample guarantees the statistical validity of the results. However, future experimental investigations should corroborate the causal relationship between the factors that we have analyzed and the forms that adherence to SDS adopts.

Our findings leave open some research questions. For example, why does adherence to SDS sometimes discriminate between men and women, and sometimes discriminate based on gender role? We propose to continue studying SDS from a gender identity perspective. Moreover, future research should study SDS in non-heterosexual samples. It should also be investigated whether the dimension of behaviors related to sexual shyness is less reactive in capturing new forms of adherence to SDS.

Future research should continue to explore the role of gender norms, relating to both sexual freedom and sexual shyness, in SDS adherence. Likewise, having participants from different generational cohorts will contribute to knowing the weight they have on the disposition to social domination gender-based, age and differential socialization.

Conclusion

Throughout the second half of the 20th century, sexual attitudes have become more liberal, and since the late 1970s, there has been an egalitarian standard regarding premarital sex. These cultural changes and the inconsistent nature with which the sexual double standard is displayed favor the lack of agreement about its existence. This study contributes to the understanding of the factors that favor the inconsistency with which SDS is manifested. We conclude from our results that in order to study SDS adherence, it is necessary to consider different leves of analysis (e.g., individual and contextual). This approach will shed more light to the conditions under which the different SDS typologies occur (e.g., man-favorable SDS, woman-favorable SDS, egalitarian, and ambivalent). Likewise, contextualizing the study of SDS in the setting of relations among men and women and the motivation towards ingroup favoritism will foster a deeper understanding of the predictive role of gender, gender identity, age, dominance orientation, and sexual gender norms on SDS adherence typologies. Democratic societies favor the prevalence of egalitarian people, but SDS has not been eliminated from society, not even from democratic ones. Depending on whether the social context approves of sexual openness or censures sexist prejudices, new forms of adherence to SDS may appear and, in between, there remains an SDS that preserves the traditional gender-based social hierarchy. Understanding which conditions favor the internalization of attitudes favorable to sexual gender equality is a primary objective.

Data availability statement

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

Ethics statement

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

Author contributions

CG-B: conceptualization, formal analysis, methodology, project administration, resources, investigation, original draft preparation, and writing-review and editing. NM: data curation, formal analysis, methodology, software, visualization, original draft preparation, and writing-review and editing. AÁ-M: conceptualization, data curation, methodology, software, original draft preparation, review, and editing. JS: conceptualization, funding, acquisition, project administration, supervision, validation, original draft preparation, and writing-review and editing. All authors contributed to the article and approved the submitted version.

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Conflict of interest

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

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Internalized homophobia and sexual risk behavior in men who have sex with men: The mediational role of sexual self-concept

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Men who have sex with men (MSM) are one of the populations most likely to be infected with human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) worldwide. Sexual risk behaviors (SRB) are the main route of HIV transmission. Among the factors associated with SRB, internalized homophobia (rejection of one's sexuality) is a risk factor unique for MSM. However, how this factor influences SRB is not clear. Therefore, the present study attempts to clarify the mechanism of action of the relationship between internalized homophobia on SRB based on the mediating effects of sexual self-concept. A study was conducted with 124 MSM living in Chile over 18 years of age (*M* = 24.4 and *SD* = 4.19). Through path analysis, it was observed that internalized homophobia has slight inverse effects on SRBs (multiple sexual partners and sexual activity under the influence of alcohol or drugs) when the sexual self-efficacy dimension acts as a mediating variable. These findings suggest that developing sexually transmitted infections (STIs) and HIV/AIDS prevention campaigns focused on MSM must highlight the development of a healthy sexual self-concept and address self-stigma.

KEYWORDS

internalized homophobia, sexual risk behavior, sexual self-concept, men who have sex with men, PHAT analysis

Introduction

Sexually Transmitted Infections (STIs), including Human Immunodeficiency Virus (HIV), have become a global public health challenge (Hemelaar et al., 2019; Mahy et al., 2021; Quinn, 2021), given the increase in the number of people infected with HIV (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2021). HIV is prevalent primarily among young people aged 20–29, with a 3/1 male-to-female ratio (Institute of Public Health, 2016; Goldstein, 2019). Within high-risk groups, men who have sex with men (MSM) have the highest prevalence, at least 20 times higher than the general population (Stuardo, 2017; Diaz et al., 2019; Kabapy et al., 2020). The main way of HIV transmission is sexual risk behaviors (SRB) (Martinez et al., 2016; Luz et al., 2019; Coelho et al., 2021; Mulaudzi et al., 2022; Wei et al., 2022). Understood as sexual situations or practices that generate harm to one's or others' sexual health, for example, (1) sexual activity with multiple partners (Sönmez et al., 2021; Dong et al., 2022), (2) absence or misuse of condoms (Closson et al., 2018; Chu and Huang, 2020), (3) sexual activity under the influence of alcohol and drugs (Palfai and Luehring-Jones, 2021; Bustamante et al., 2022).

Different factors have been associated with SRB, including family values, peer group attitudes, alcohol and drug use, sex education, and social context (Jarrett et al., 2018; Valencia et al., 2018; Blondeel et al., 2021; Bozzini et al., 2021). Likewise, there is a large body of research focused on the individual's psychological factors, which points to certain personality types and behaviors as a possible explanation for SRB (e.g., risk perception; sexual sensation seeking) (Danko et al., 2016; Xu et al., 2016; Gil-Llario et al., 2018; Wang et al., 2021).

Within these psychological factors, there is one that is specific to the lesbian, gay, bisexual, and transgender LGBT populations, and particularly to MSM, called internalized homophobia or internalized homonegativity (IH) (e.g., Berg et al., 2013; Parker et al., 2016; Rendina et al., 2017; Ramos et al., 2021; Michli and Jamil, 2022), both refers to a negative attitude toward one's sexuality and is attributed to experiences of victimization and cultural heterosexism (Williamson, 2000), which, in extreme cases, can lead to rejection or shame of one's sexual orientation, experiencing guilt, discrimination, having poor attachment to non-heterosexual others, and feeling dissatisfied with same-sex sexual activity (Meyer and Dean, 1998; Frost and Meyer, 2009; Cao et al., 2017; Meanley et al., 2020; Gill and Randhawa, 2021).

Some studies have shown a relationship between IH and SRB, noting that people who experience significant rejection of their sexuality tend to have more SRB, like inadequate condom use (Huebner et al., 2002; Morell-Mengual et al., 2017). However, it is unclear how internalized homophobia influences sexual risk behavior (Newcomb and Mustanski, 2011; Smolenski et al., 2011; Berg et al., 2015; Doyle and Molix, 2015; Puckett et al., 2017; Michael and Soskolne, 2020). Among the possible explanations found in the literature, it has been suggested that IH could affect the development of a healthy sexual self-concept (Hossain and Ferreira, 2019), propitiating risky sexual behaviors.

The self-concept refers to the dynamic and organized system of beliefs that an individual has about his or her identity, which is formed through experience and perceptions of the environment, playing an important role in multiples behaviors (Shavelson et al., 1976; Marsh and Shavelson, 1985; Jankowski et al., 2021). The literature often distinguishes between general self-concept and sexual self-concept; the latter is more specific and has been more frequently incorporated in sexuality research (Salehi et al., 2015a,b; Siu-ming et al., 2019). Sexual self-concept is defined as a multidimensional psychological construct that contains positive or negative cognitions and emotions about one's sexuality (Deutsch et al., 2014; de Neve-Enthoven et al., 2022), which partially guides sexual behaviors (Sigre-Leirós et al., 2015; Potki et al., 2017; Emetu et al., 2020).

In the case of IH and its relationship with sexual self-concept, evidence suggests that those who are more prejudiced toward their sexuality tend not to express adequate identity integration (Rowen and Malcolm, 2003). Additionally, they exhibit a lower physical self-concept than heterosexual men (Shenkman and Toussia-Cohen, 2020) and also have a negative sexual self-image (Garcia et al., 2016; Puckett et al., 2018; Træen, 2018; Morell-Mengual et al., 2021; Foster et al., 2022). However, when there is adequate identity integration, levels of internalized homophobia decrease, as does depressive symptomatology (Li et al., 2021).

Although, studies attempting to explain the effects of IH on SRB are observed in the literature (e.g., Newcomb and Mustanski, 2011; Berg et al., 2015; Puckett et al., 2017; Michael and Soskolne, 2020). Explanations could be incomplete as the mechanism of action would not be direct, which makes it essential to develop new research exploring other strategies, as noted by Puckett et al. (2017).

The hypothesis in the following study proposes that self-stigma toward sexuality has a negative impact on sexual self-concept (Herek et al., 2015). This damage, in turn, would make people more prone to engage in risky sexual behaviors by decreasing the levels of sexual assertiveness to reject such behaviors (Ménard and Offman, 2009; Javier et al., 2018; Shafer et al., 2018; Van de Bongardt and de Graaf, 2020; Brasileiro et al., 2021). Therefore, this research aims to examine, through a mediation model, the mechanism of action of internalized homophobia on SRB, involving the indirect effects (i.e., mediation) of sexual self-concept in Chilean MSM.

Materials and methods

A cross-sectional study with a descriptive correlational design was conducted (Ato et al., 2013). The sampling was non-probabilistic, mixing snowball and social network strategies (León and Montero, 2007).

Participants

The sample consisted of 124 men who reported having sex with men in the last year. Only 124 cases were considered for the final sample out of 254 completed forms, given the inclusion criteria defined for the study (i.e., being male, having had sexual relations with other men in the last year, residing in Chilean territory, and having less than 10% of missing values).

Most respondents were residents of Arica (51.6%), followed by the city of Santiago de Chile (26.6%). The mean age was 24.4 years (*SD* = 4.19). A total of 65.3% of the participants reported not having a stable relationship, 26.6% had a partner, and 8.1% were living with a partner together. As for their educational level, 87.9% reported having completed or been in higher education, and 12.1% reported having completed secondary education. Over one-third (30.6%) reported being diagnosed with an STI, and 14 (11.3%) with HIV/AIDS. Regarding the sexual orientation of the participants, 66.1% reported being sexually attracted only to men, 23.4% reported being generally attracted to men. A further 7.3% reported being sometimes attracted to men and to a lesser extent 2.4% reported being generally attracted to women and finally only 0.8% reported being totally attracted to women in the sexual domain. On the other hand, 67.7% reported having sex only with men, 16.1% reported having sex usually with men, as well as 14.5% reported having sex sometimes with men.

Instruments

The Sexual Risk Behavior Scale (SRBS) (Ferrer-Urbina et al., 2019) is a 12-items self-report measure that assesses sexual behaviors at risk of STI or HIV/AIDS infection. Through four dimensions: sexual activity with multiple partners (items = 4); inappropriate or insufficient use of protective barriers (items = 4); (c) sexual activity under the influence of alcohol or drugs (items = 4); (d) knowledge of the partner's sexual record (items = 4). The items are 4-level Likert attitudinal/behavioral statements (1 "Never"—4 "Always"). The version used has reported evidence of validity based on the internal structure of the test and adequate levels of reliability ($\omega > 0.8$) (Ferrer-Urbina et al., 2019). The dimension of partners sexual history was excluded in a phase prior to data collection, as this dimension does not refer to risky sexual behavior itself. It has also been excluded from other published studies (Ferrer-Urbina et al., 2022).

Internalized Homophobia Scale (IHS) (Wagner, 1998) is a self-report measure composed of 20-items assessing the level of internalized homophobia This scale was conceived initially for homosexual men (Wagner, 1998); nonetheless, the present study gives it a more generalized use, involving a broader population such as MSM (i.e., who may be or identify as bisexual, pansexual, or even heterosexual regardless of their sexual behavior). The items are answered on a 5-point Likert scale (1 "Strongly disagree"—5 "Strongly agree"). The scale has reported adequate levels of reliability ($\alpha > 0.7$) and evidence of validity, based on the internal structure of the construct, in Chilean samples (Pinto-Cortez et al., 2018).

The multidimensional scale of sexual self-concept (MSCS) (Ferrer-Urbina et al., 2019) is a 16-items self-report measure that assesses four dimensions whit 4-items each, which make up sexual self-concept: Sexual self-esteem, which refers to feelings about one's sexuality (items = 4); sexual self-efficacy, concerning beliefs about one's sexual ability (items = 4); assertive sexual behavior (items = 4); assertive sexual communication (items = 4), understood as the expressions of one's sexual desires. The items are 4-level Likert behavioral/attitudinal statements (1 "Never"—4 "Always"; 1 "Strongly disagree"—4 "Strongly agree"). The scale has reported satisfactory levels of reliability in all its dimensions, and validity evidence, based on the internal structure of the test, through exploratory structural equation models in the Chilean sample (Ferrer-Urbina et al., 2022).

Procedure

The Scientific Ethics Committee of the Universidad de Tarapacá approved the study within the framework of the FONDECYT Initiation Project No. 11170395.

The questionnaire was disseminated through social networks. An informed consent form was included at the beginning of the questionnaire explaining the study's objectives, the voluntary nature of the application, and the confidentiality and anonymity of the data. Once participation was agreed upon, the participants answered three instruments (i.e., sexual risk behavior questionnaire, internalized homophobia questionnaire, and multidimensional sexual self-concept questionnaire) and a demographic section, with questions regarding age, and sexual orientation, among others. Once the questionnaire was completed, participants were invited to forward the form to their friends and close contacts to reach a significant number of people.

The response time for the questionnaire was approximately 15 min.

Data analysis

The means and standard deviations of all dimensions were initially calculated. At the same time, internal consistency was examined using Cronbach's alpha coefficient ($\alpha > 0.07$). Additionally, univariate relationships were assessed using Pearson correlations, which were interpreted using Cohen's effect size criteria (Cohen, 1988). Finally, a path analysis estimated indirect effects (i.e., mediation) was performed (Kline, 2016). Standardized regression coefficients (β) were assessed to determine the strength and direction of relationships between independent variables (i.e., internalized homophobia) and dependent variables (i.e., SRB in particular: multiple sexual partners; inadequate use of protective barriers; sexual intercourse under the influence of alcohol and drugs) while controlling for variables that comprise sexual self-concept (i.e., sexual self-esteem; sexual self-efficacy; assertive sexual behavior; assertive sexual communication). In addition, multiple regression assumptions were tested. Analyses were conducted using Jamovi software version 0.9.5.11 (The Jamovi Project, 2019).

Results

The means and standard deviations of each of the dimensions, along with the reliability estimates, are presented in **Table 1**.

The scales are shown on a standard metric of 1–4, except for the IHS, which is on a scale of 1–5. Remarkably, the dimensions with the lowest means are sex under the influence of alcohol and drugs ($\bar{x}$= 1.61), the multiplicity of sexual partners ($\bar{x}$= 1.71), and internalized homophobia ($\bar{x}$= 1.94), while all the dimensions of sexual self-concept present the highest means (> 3.00). Regarding the reliability estimates, most of the dimensions presented optimal or acceptable estimates, except for the variable: inadequate use of protective barriers which presented a lower value of 0.61.

In the case of the univariate effects of internalized homophobia on dimensions of sexual self-concept and sexual risk behavior, it is observed that internalized homophobia variable shows a moderate, inverse, and statistically significant effect on sexual self-efficacy ($r = -0.368$; $p < 0.001$), a small effect on assertive sexual communication ($r = -0.198$; $p < 0.05$) and sexual self-esteem ($r = -0.266$; $p < 0.01$). Also, a slight inverse effect ($r = -0.246$; $p < 0.01$) is observed in the inadequate use of protective barriers.

In the sexual self-concept and the dimensions that compose sexual risk behavior, a statistically significant, slight direct effect ($r = 0.252$; $p < 0.01$) is observed between sexual self-efficacy and the multiplicity of sexual partners, and a slight inverse effect ($r = -0.207$; $p < 005$) between assertive sexual behavior and sex under the influence of alcohol and drugs.

Concerning the evaluation of the assumptions for the development of a path model, it was found that there were no collinearity problems (tolerance > 0.4; VIF < 2) between independent and moderator variables. Moreover, the residuals of the dependent variables did not show severe deviations from normality (see **Supplementary material**). In addition, a posterior statistical power estimation was performed. The model used was one in which the direct effects between variables were equivalent to the largest effects observed in the correlation table (see **Table 2**); the power was 0.78 (Schoemann et al., 2017).

A mediated pathway was developed to assess whether the effects of internalized homophobia on SRB are mediated by sexual self-concept. In this model, the mediating variables were sexual self-esteem, sexual self-efficacy, assertive sexual behavior, and assertive sexual communication. The results of the mediation analysis are shown in **Table 3**.

It is observed that internalized homophobia has a direct, statistically significant, and inverse effect on the adequate use of protective barriers (β = −0.264, $p < 0.01$). Similarly, regarding indirect effects, it was observed that internalized homophobia had inverse effects on multiple sexual partners (β = −0.121, $p < 0.01$) when the sexual self-efficacy dimension acted as a mediating variable. No significant direct effects of internalized homophobia were found on the multiplicity of sexual partners or sex under the influence of alcohol or drugs. Nor were indirect effects of assertive sexual behavior, such as assertive sexual communication or sexual self-esteem, observed as mediating variables.

Discussion

Employing a mediation model, this study aimed to examine the link between internalized homophobia and SRB through sexual self-concept in MSM. The results suggest that internalized homophobia has only slight inverse effects on the absence or misuse of condoms (i.e., a higher level of internalized homophobia is linked to a decrease in inappropriate use of protective barriers). However, when sexual self-efficacy acts as a mediating variable, an effect on the multiplicity of sexual couples is presented, which gives partial support to the study hypothesis since we only observed mediation in one of the 12 contrasted combinations (i.e., 3 dimensions of SRB × 4 dimensions of self-concept).

Regarding the effects of internalized homophobia on the dimensions that make up sexual self-concept (i.e., sexual self-esteem, sexual self-efficacy, assertive sexual behavior, assertive sexual communication), inverse effects were observed on sexual self-efficacy, sexual self-esteem, and assertive sexual communication. The higher the levels of internalized homophobia, the lower the perceived ability to achieve effective sexual behaviors and responses, communicate sexual preferences and needs, and have a more negative appraisal of one's sexuality. This appraisal is consistent with available research, as previous studies have shown that those who are more prejudiced against their sexuality have negative self-concepts about their sexuality (Hossain and Ferreira, 2019).

However, in the case of internalized homophobia and SRB (i.e., SRB in particular: multiple sexual partners; inadequate use of the protective barriers; sexual relations under the influence of alcohol and drugs), inverse effects on the inadequate use

TABLE 1 Descriptive statistics for sample.

	Dimensions	M	SD	α
Independent variable	Internalized homophobia	1.94	0.584	0.858
Mediating variables	Sexual self-esteem	3.01	0.632	0.813
	Sexual self-efficacy	3.22	0.573	0.878
	Assertive sexual behavior	3.20	0.694	0.831
	Assertive sexual communication	3.20	0.609	0.809
Dependent variables	Multiplicity of sexual partners	1.71	0.545	0.782
	Inadequate use of protective barriers	2.22	0.502	0.610
	Sex under the influence of alcohol and drugs	1.61	0.543	0.780

M, mean; SD, Standard deviation; α = Cronbach's alpha coefficient.

TABLE 2 Correlation coefficients between measures.

Variable	1.	2.	3.	4.	5.	6.	7.
Internalized homophobia	–						
Sexual self-esteem	−0.266**						
Sexual self-efficacy	−0.363***	0.570***					
Assertive sexual behavior	−0.149	0.188*	0.246**				
Assertive sexual communication	−0.198*	0.354***	0.363***	0.456***			
Multiplicity of sexual partners	−0.144	0.039	0.252**	−0.078	0.018		
Inadequate use of protective barriers	−0.246**	0.020	0.057	−0.022	0.030	0.252**	
Sex under the influence of alcohol and drugs	0.045	0.135	0.104	−0.207*	−0.094	0.328***	0.242**

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; α = Cronbach's alpha coefficient.
Independent variable = internalized homophobia; mediating variables = sexual self-esteem; sexual self-efficacy; assertive sexual behavior and assertive sexual communication; dependent variables = multiplicity of sexual partners; Inadequate use of protective barriers; sex under the influence of alcohol and drugs.

of protective barriers are observed, which differs from what has been found in the literature, where it has been pointed out that higher levels of internalized homophobia would decrease control over one's sexual behavior, making it more impulsive and risky (Puckett et al., 2017). However, in the sample studied, there seems to be an opposite effect since when the levels of rejection of one's sexuality are higher, the proper use of condoms increases. A possible explanation for this finding could be that higher levels of internalized homophobia translate into higher levels of stigmatization and prejudice toward LGBT people, including beliefs such as that LGBT people are promiscuous and that homosexuality and transsexuality are directly related to HIV/AIDS (Barrientos et al., 2016).

In the mediational analysis, results shown that internalized homophobia has an indirect effect on SRB (i.e., multiple sexual partners) when it is mediated by sexual self-efficacy. This result is consistent with the findings of Shahar et al. (2020), who found no relationship between internalized homophobia and SRB in MSM, except when mediating variables such as self-efficacy and depression were considered. In this particular case, a possible explanation could be that people who have high levels of internalized homophobia tend to have a lower diversity of sexual partners, but only when they have low perceived self-efficacy, whereas, in those who have higher levels of sexual self-efficacy, internalized homophobia has no impact on partner diversity.

Although these findings show a minor role of IH on SRB, these results show that the direct effects of IH may be underestimated by not including other variables that may have relevant mediational effects. Additionally, the small effect sizes may be underestimated, given that the sample presented low mean levels of HI and SRB. The high mean levels of sexual self-concept, accompanied by low dispersion, may underrepresent the effects observed at more extreme values. Despite this, we consider that, our findings add to the emerging field of research on the mechanisms that influence and mediate internalized homophobia in sexual minorities such as MSM (Li et al., 2021; Munn and James, 2022), we emphasize the need to incorporate other mediational aspects to the study and understanding of HI (e.g., social support, age, gender) aspects that are not very frequent but that could contribute to a better understanding.

Finally, it is necessary to point out the limitations of population representativeness, both because of the small sample size and the non-probabilistic approach, so it is

TABLE 3 Standardized and unstandardized estimates, of internalized homophobia on sexual risk behavior, mediated by sexual self-concept.

		Dependent variables models											
		Multiplicity of sexual couples				Inadequate use of protective barriers				Sex under the influence of alcohol and drugs			
		β_{std}	SE	C.I. 95%		β_{std}	SE	C.I. 95%		β_{std}	SE	C.I. 95%	
				Lower	Upper			Lower	Upper			Lower	Upper
Internalized homophobia	Direct effect	−0.079	0.077	−0.235	0.069	−0.264**	0.082	−0.408	−0.07	0.084	0.122	−0.155	0.324
	Total	−0.144	0.083	−0.297	0.028	−0.245**	0.075	−0.358	−0.063	0.045	0.083	−0.122	0.206
Sexual self-steem	Indirect effect	0.038	0.033	−0.018	0.110	0.011	0.029	−0.048	0.072	−0.040	0.032	−0.108	0.022
Sexual self-efficacy	Indirect effect	−0.121**	0.042	−0.210	−0.039	0.003	0.034	−0.059	0.075	−0.047	0.033	0.015	0.015
Assertive sexual behavior	Indirect effect	0.020	0.019	−0.009	0.069	0.009	0.017	−0.018	0.049	0.032	0.022	0.083	0.083
Assertive sexual communication	Indirect effect	8.17e-4	0.022	0.036	0.054	−0.004	0.022	−0.058	0.036	0.015	0.022	0.064	0.064

β_{std}, Betas standardized; SE, Standard; C.I, confidence intervals.
$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$.

suggested that this study be replicated in other samples to increase the generalizability of these findings. Replication and clarification of these findings could be valuable for developing STI and HIV/AIDS prevention campaigns focused on MSM, highlighting the importance of promoting the development of a healthy sexual self-concept and combating stigma toward the MSM population.

Conclusion

These results support the idea that internalized homophobia is not a relevant risk factor by itself. However, when associated with other aspects such as self-concept and self-perceived efficacy, it becomes detrimental for MSM, as in some cases it could generate different risk behaviors, specifically those addressed in this study referring to risky sexual behaviors (i.e., multiple partners). These results demonstrate the need to expand the field of research.

Data availability statement

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

Ethics statement

The studies involving human participants were reviewed and approved by the Comité de ética científico de la Universidad de Tarapacá. The patients/participants provided their written informed consent to participate in this study.

Author contributions

RF-U contributed to conceptualization, review, and editing of methodology and was the main academic and research mentor. GS-P contributed to formal analysis, data curation, and writing the original draft. FS-P wrote the original draft and participated in the preparation of the original research concept. RF-U, GS-P, and FS-P participated in the review of the research proposal, prior to submission. DA, PB, JC, MF, and BZ worked to process the samples. All authors contributed to the article and approved the submitted version.

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Conflict of interest

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

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Supplementary material

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Conscientious objection as structural violence in the voluntary termination of pregnancy in Chile

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Introduction: After three decades of the absolute prohibition of abortion, Chile enacted Law 21,030, which decriminalizes voluntary pregnancy termination when the person is at vital risk, when the embryo or fetus suffers from a congenital or genetic lethal pathology, and in pregnancy due to rape. The law incorporates conscientious objection as a broad right at the individual and institutional levels.

Objectives: The aim of the study was to explore the exercise of conscientious objection in public health institutions, describing and analyzing its consequences and proposals to prevent it from operating as structural violence.

Materials and methods: This study uses a qualitative, post-positivist design. At the national level, according to the chain technique, people who were identified as key actors due to their direct participation in implementing the law were included. Grounded theory was used to analyze the information obtained through a semi-structured interview. The methodological rigor criteria of transferability or applicability, dependability, credibility, auditability, and theoretical-methodological adequacy were met.

Results: Data from 17 physicians, 5 midwives, 6 psychologists, 8 social workers, 2 nursing technicians, and 1 lawyer are included. From an inductive process through open coding, conscientious objection as structural violence and strategies to minimize the impact of objection emerge as meta-categories. The first meta-category emerges from the barriers linked to the implementation of the law, the infringement of the rights of the pregnant person, and pseudo conscientious objection, affecting timely and effective access to pregnancy termination. The second meta-category emerges as a response from the participants, proposing strategies to prevent conscientious objection from operating as structural violence.

Conclusion: Conscientious objection acts as structural violence by infringing the exercise of sexual and reproductive rights. The State must fulfill its role as guarantor in implementing public policies, preventing conscientious objection from becoming hegemonic and institutionalized violence.

KEYWORDS

conscientious objection, abortion, structural violence, sexual health, reproductive health, sexual and reproductive rights

Introduction

Conscientious objection in health is considered the main barrier to accessing legal abortion services (Faúndes and Shah, 2015). Recently it has been contemplated as a non-monetary conflict of interest, the ethical problem arising when the professionals' interest influences or prevents the fulfillment of their duties, the consequence of which is a service that is not governed by the usual standard but by the non-monetary interests of the staff or the institution (Giubilini and Savulescu, 2020).

Conscientious objection in the Chilean legal framework

After 28 years of absolute criminalization of abortion, on 14 September 2017, Law 21,030 was enacted in Chile, decriminalizing voluntary termination of pregnancy (VTP) on three grounds. Ground No. 1: The person is at vital risk so that the termination of pregnancy avoids danger to her life; ground No. 2: The embryo or fetus suffers from an acquired congenital or genetic pathology of lethal character, incompatible with independent extrauterine life; ground No. 3: The pregnancy is the result of rape, provided that no more than 12 weeks of gestation have elapsed in those older than 14 years, and 14 weeks in those younger than 14 years (Ministry of Health Chile, 2017).

The law marked an inflection point for conscientious objection by incorporating it as a right for the physician required to perform the termination and by extending it to all professional and technical personnel working in the surgical ward during the termination of pregnancy, including health institutions with or without confessional ideology[1] (Ministry of Health Chile, 2017; Montero and Villarroel, 2018; Tribunal Constitucional de Chile, 2019b).

After the enactment of the law, the debate on conscientious objection continued. Before the end of President Bachelet's second term in office (2014–2018), a specific protocol was drawn up to regulate its exercise following the guidelines established in the law (Ministry of Health Chile, 2018c). With the advent of a new government with a conservative political ideology that was against abortion, modifications were introduced to this protocol, reducing the restriction for its invocation by individual and institutional providers (Ministry of Health Chile, 2018b). After analyzing the proposal, the Office of the Comptroller General of the Republic[2] rejected the new protocol, considering that private institutions that provide gynecological-obstetric services and receive State support could not declare themselves to be objectors, mandating the preparation of a specific regulation on this matter. The regulation mentioned before came into force on 23 October 2018 (Ministry of Health Chile, 2022c), following the unconstitutionality appeal filed by parliamentarians opposed to abortion (Tribunal Constitucional de Chile, 2019a) and the new ruling of the Constitutional Court, which allows private health institutions with State contributions to declare themselves objectors even when they perform functions subrogated by the State[3] (Tribunal Constitucional de Chile, 2018). The regulation stipulates that public health institutions may not declare themselves objectors (Ministry of Health Chile, 2022c).

The broad scope of conscientious objection in Chilean law reveals the complexity of its exercise, raising concern about the risk that it may operate as an ideological barrier affecting the sexual and reproductive health and rights of pregnant persons[4]

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[1] The Constitutional Court, in an instance prior to the enactment of the law, extended conscientious objection to health institutions and to professional and technical personnel working in surgical wards.

[2] Office of the Comptroller General of the Republic: It is the highest control body of the State Administration, which is provided for in the political Constitution and is autonomous from the Executive Branch and other public bodies. It controls the legality of administrative acts and safeguards the correct use of public funds.

[3] The subrogation of functions by the State implies the delegation of functions to private health institutions, which, through a State stipend, provide health care services.

[4] For the purposes of this article, although law 21,030 does not make it explicit, pregnant persons are understood as those who identify with the female gender and those who, even when they do not identify with

in the implementation of this public policy (Montero and Villarroel, 2018; Montero et al., 2021).

In this context, according to information updated to 31/03/2021, obtained from 57 public health institutions, it shows that out of 4,378 contracted employees, 12.7% object on ground 1 (risk to the life of the pregnant person), 17% on ground 2 (lethal congenital alteration), and 25.7% on ground 3 (pregnancy due to rape). According to the profession, 19% of obstetricians/gynecologists objected on ground 1, 27.6% on ground 2, and 49% on ground 3 (Montero et al., 2021).

The health system in Chile

In order to contextualize conscientious objection and access to VTP, we must detail some characteristics of the health system.

Chile has a hybrid system consisting of public insurance or the National Health Fund (FONASA), which currently covers about 15 million beneficiaries, equivalent to 77% of the population, and consists of four levels (A, B, C, and D), with the most vulnerable people concentrated in levels A and B (National Healthcare Fund, 2022). It includes a private system administered by private health insurance companies (ISAPRES), private entities based on health insurance, created during the Chilean civil-military dictatorship, which involves about 19% of the population (The Isapres, 2022). Other specific insurances for officers of the armed forces are financed with general taxes and other private non-profit or mutual health institutions, with coverage for occupational accidents and diseases (Becerril-Montekio et al., 2011).

According to the degree of complexity, health services are provided at three levels of care. In the public sector, the first level corresponds to primary healthcare (PHC), which is responsible for comprehensive care according to the life course through health promotion, prevention, treatment, rehabilitation, and palliative care (World Health Organization, 2022). It is mainly managed by municipal health directorates and corporations,[5] with regulation and supervision by the Ministry of Health (Becerril-Montekio et al., 2011; Dazarola, 2022; Goldstein, 2022). The secondary and tertiary levels are administered by the Health Services, under the Ministry of Health, and include specialized outpatient and inpatient care (Becerril-Montekio et al., 2011; Goldstein, 2022). In the private sector, the levels are limited to care provided by a provider in medical centers or clinics.

According to the technical standards of the Ministry of Health, services directly related to VTP, such as the establishment of grounds,[6] psychosocial accompaniment, and procedures for termination of pregnancy, are contemplated at the obstetric and gynecological specialty level and are therefore only provided at the secondary and tertiary levels of care[7] (Ministry of Health Chile, 2018a).

Structural violence in health

Structural violence refers to violence in which some social structure or institution can harm people by preventing them from satisfying their basic needs and focuses attention on the legal, political, economic, and sociocultural systems and relationships that are part of society and that shape the experiences of individuals, including health and wellbeing (Sinha et al., 2017).

Concerning VTP, these structures or institutions would correspond, on the one hand, to the State by incorporating a broad conscientious objection and establishing it as a right. On the other hand, it would include health institutions where this objection is operationalized.

Another example of the violation of rights was the debate surrounding emergency contraception. Chile has a long history of sexual and reproductive health policies. In 1931, a Sanitary Code was enacted, which permitted abortion on therapeutic grounds. In 1967, the government of Eduardo Frei Montalva adopted the first fertility regulation policy and the first sex education program, policies that the government of Salvador Allende continued. The civil-military dictatorship reformed the health system and forbade therapeutic abortion in 1989. With the recovery of democracy, new problems emerged that hindered the advancement of sexual and reproductive rights (Cubillos, 2019). One of them has been the controversy regarding emergency contraception, where the public policy found opponents to its distribution in 2007. A pharmaceutical chain and several majors—in charge on primary healthcare—invoked conscientious objection to selling or providing emergency contraception (Casas, 2008). The enactment in 2010 of Law 20,418 named Sets Standards on Information, Guidance, and Services Regarding Fertility Regulation resolved the contradiction of access

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this gender, have reproductive organs that allow them to gestate, for example transgender men and persons with non-binary gender identity.

[5] Chile is territorially and administratively divided into communes, provinces and regions. The municipalities are bodies responsible for communal government and development. Although they have autonomy in their attributions and legal functions, they are part of the State administration (Dazarola, 2022).

[6] The constitution of the ground includes all the procedures that accredit that the pregnant person is in one of the grounds contemplated in the law.

[7] With regard to VTP, the secondary level in the public sector corresponds to outpatient care in High Obstetric Risk Polyclinics (HOR) integrated or attached to hospital facilities. For private providers, it corresponds to consultations attached to clinics and/or medical centers. The tertiary level corresponds to inpatient care in public sector hospitals and in medium and high complexity private clinics in the private sector (Ministry of Health Chile, 2018a).

to emergency contraception. The law has no reference to conscientious objection (Ministry of Health Chile, 2022b). However, the national norms on fertility regulation considers the possibility that if there are conscientious objections, the provider must refer, without delay, the person to another professional (Ministry of Health Chile, 2006).

These structural inequalities are especially detrimental to women due to the intersection of gender and existing conditions, such as poor health, inadequate education, and access to continuity of care (Nandagiri et al., 2020), giving rise to unequal life opportunities that affect the health and wellbeing of women throughout their life cycle.

Considering that in Chile, the majority of the population receives healthcare in public health institutions (Becerril-Montekio et al., 2011; National Healthcare Fund, 2022), this article aims to explore the exercise of conscientious objection within these institutions, describing and analyzing the main consequences of VTP and the proposals to prevent it from operating as a form of structural violence against pregnant persons. Another aim of this article is to propose orientations and guidelines that contribute to solving and preventing the difficulties observed in implementing this public policy.

Materials and methods

Design

The research design corresponds to a qualitative one under the post-positivist paradigm, positioning the researcher as a relative observer, accepting the inability to reach an absolute objective State and a complete understanding with only approximations to reality being feasible to obtain. The researchers may not be able to fully understand what it is or how to get to reality because of hidden aspects (Lincoln and Guba, 2017).

Recruitment of participants and collection of information

The selection of participants was made considering the public health institutions at the second and third levels of healthcare, mandated according to the technical standard to perform VPT (Ministry of Health Chile, 2018a). In health institutions where it was possible to obtain the director's authorization, initial contact was made with a key informant. The informant made the contact possible through snowball sampling (Kirchherr and Charles, 2018) to those professionals who were directly involved in the implementation and application of Law 21,030: personnel in managerial positions, members of the psychosocial accompaniment team (psychosocial duo),[8] and members of the biomedical health team (obstetricians and gynecologists, anesthesiologists, midwives, and nursing technicians). The key informants received personalized requests as invitations informing them about the study. In addition, civil society actors[9] were incorporated.

The data collection technique was semi-structured interviews. A protocol was prepared, validated by expert judgment and pilot tests for making the adjustments, allowing the incorporation of the main thematic areas related to conscientious objection in the implementation of the VTP law: characteristics and process for its invocation and exercise, role of managers, knowledge of objectors' identity, implications for the care of the pregnant persons, and proposals and strategies that guarantee the right to dignified, effective, and timely care.

Although the protocol has standard guidelines for different participants, some aspects apply to everyone according to their role within the institution. Different protocols were used according to the type of relevant actors.

A total of two authors conducted interviews with proven experience in this technique. The interviews were conducted in person and by videoconferencing due to the pandemic of SARS-CoV-2. After the interview, only the audio recording was transcribed into text by two transcribers who signed a confidentiality agreement.

Data analysis

The qualitative data analysis was conducted using grounded theory according to Strauss and Corbin (Bryant and Charmaz, 2019), making it possible to describe and explain the content and internal structure of a partial or insufficiently studied phenomenon such as the one proposed. The analysis includes open coding, constructing codes from particular data, and giving rise to categories and meta-categories (Chun Tie et al., 2019).

Before the analysis, it was verified that the transcription of the interviews into text was literal. The transcriptions were read several times to obtain a general understanding of their content.

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[8] Law 21.030 establishes the person's right to access a voluntary accompaniment program, which includes shelter and psychosocial support during and after the decision-making process, which must be carried out with her authorization, in a personalized manner and respectful of her decision. In public health institutions, the accompaniment is carried out by a "psychosocial duo" formed by a professional psychologist and a social worker. The law considers that non-profit civil society organizations may also provide this accompaniment, it being the person's prerogative to choose the one she considers most appropriate according to her situation and personal convictions (Ministry of Health Chile, 2017, 2018a).

[9] Civil society actors are professionals affiliated with a non-governmental organization (NGO) who have participated in the psychosocial accompaniment or training on the law or are affiliated with a professional or guild association.

Codes were compared in terms of similarities and differences. Codes with similar meanings were assigned to a category.

According to the constant comparison method, the initial categories were compared and integrated, achieving a common category. In the abstraction stage, the categories and subcategories were labeled according to the codes and their contents, obtaining the content of the category. In addition, the analysis was supported by ATLAS.ti version 9.0.5® software.

To ensure the quality and validity of the research, the criteria of methodological rigor of transferability or applicability, dependence, credibility, auditability, and theoretical-methodological adequacy were met (Rojas and Osorio, 2017).

To ensure transferability, a sociodemographic survey was applied in order to gather information from the participants, which would allow other researchers to apply this information in their own contexts. Dependability was achieved through triangulation of the analysis by the researchers. Credibility was achieved through an exhaustive process both in the methodological design and in the fieldwork and analysis, incorporating the notes obtained during the data collection process (memos). Auditability was obtained through the rigorous transcription of the interviews and a detailed description of the methodological path. Theoretical-epistemological adequacy was used as the last criterion (Rojas and Osorio, 2017). After a review of various paradigms and perspectives by the research team, it was decided to use grounded theory to be consistent with post-positivism (Lincoln and Guba, 2017).

Ethical implications

Ethical implications are related to the participants' protection and risk-to-benefit ratio, particularly about discussing sensitive subjects. Per Chilean regulations on research ethics, prior to recruitment, authorization was requested from the hospital director[10] (Ministry of Health Chile. Department of Public Health, 2022).

The participants' authorization was required for the recording in an audio format and subsequent transcription to text. The participants' right to suspend the interview or withdraw from the study when they considered it pertinent was made explicit, including the non-inclusion of the information provided in the processing or analysis phases, without having to justify their decision.

Informed consent was obtained from the participants prior to the interviews, which were conducted in a safe space in agreement with the participants to avoid interference and to safeguard confidentiality, which was also protected by encrypting all audio files and the transcription into text, with a password available only to the team of researchers and transcribers. The information from the interviews was anonymized so as not to identify the participants and to avoid linking them to the health facility from which they came. The identity of those who participated is only known to those who conducted the interviews.

This research was approved by the Ethics Committee for Research on Human Beings, Faculty of Medicine, University of Chile (Act No. 009 - 2020).

Results

From January 2021 to January 2022, 39 interviews were conducted with key informants from eight public health institutions in Chile and two from civil society institutions, reaching information saturation.

The participants were 13 members of the psychosocial accompaniment team (psychosocial duo), 11 officials in managerial or coordination positions, 11 members of the biomedical health team, and 4 civil society representatives.

According to profession, the study included 14 obstetricians/gynecologists, 1 anesthesiologist, 1 public health specialist, 1 neonatologist, 5 midwives, 6 psychologists, 8 social workers, 2 nursing technicians, and 1 lawyer.

The average age of the participants was 43 years (24–66 years); the average work experience was 17.5 years (1–41) years; 72% of them were female. Interviews lasted an average of 55 min (23–150 min).

From the analysis of the information, the following codes emerged directly from the narrative of the participants: refusal to participate indirectly in the VTP, lack of justification for conscientious objection, lack of knowledge of objectors' identity, obstructive expert committees, dissuasive and erroneous information, doubting the story, inducing change in the decision of the pregnant person, delay in the constitution of grounds, false conscientious objection, conscientious comfort, readjust shifts, substitute functions of conscientious objectors, procure healthcare by non-objecting professionals, justification and transparency of the objection, limit the objection to actions directly involved in VTP, professional engagement, respect diversity of thought, local protocolization, committees of expert facilitators, role as guarantor of users' rights, role as facilitator of implementation, training on the content of the law, addressing myths and apprehensions, addressing conscientious objection, bioethics training, labor choice of objectors, limiting objectors in the public sector, system for monitoring the implementation of the law, and eliminate individual and institutional conscientious objection (**Table 1**).

These codes were grouped into eight categories: barriers to the implementation of the law, infringement of the rights

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[10] Law 20,120 establishes that: "All biomedical scientific research must have the express authorization of the director of the establishment in which it is carried out".

TABLE 1 Emerging categories and meta-categories.

Meta-category	Category	Codes
Conscientious objection as structural violence	Barriers to the implementation of the law	– Refusal to participate indirectly in the VTP – Lack of justification for conscientious objection – Lack of knowledge of the identity of objectors – Obstructive expert committees
	Infringement of the rights of the pregnant person	– Dissuasive and erroneous information – Doubting the story – Inducing change in the decision – Delay in the constitution of grounds
	Pseudo conscientious objection	– False conscientious objection – Conscientious comfort
Strategies for minimizing the impact of conscientious objection	Reorganize the healthcare	– Readjust shifts – Substitute functions of conscientious objectors – Procure health care by non-objecting professionals
	Regulating the practice	– Justification and transparency of objection – Limit the objection to actions directly involved in the VTP. – Professional engagement – Respect diversity of thought – Local protocolization – Committees of expert facilitators
	Management roles	– Role as guarantor of users' rights – Role as facilitator of implementation
	Training	– Training on the content of the law – Addressing myths and apprehensions – Addressing conscientious objection – Bioethics training
	Ensuring compliance with the law	– Labor choice of objectors – Limiting objectors in the public sector – System for monitoring the implementation of the law – Eliminate individual and institutional conscientious objection

of the pregnant person, pseudo conscientious objection, reorganize the healthcare, regulating the practice, management roles, training, and ensuring compliance with the law (Table 1).

To conclude the open coding, the analysis gave rise to two meta-categories: conscientious objection as structural violence and strategies for minimizing the impact of conscientious objection (Table 1).

The categories and meta-categories that emerged from the analysis of the participants' discourses are described in the following text.

Categories

Barriers to the implementation of the law

The participants identified several obstacles related to the exercise of conscientious objection that acts as a barrier to healthcare for the pregnant person. This category emerges from the following codes: refusal to participate indirectly in the VTP, lack of justification for conscientious objection, lack of knowledge of the identity of objectors and obstructive expert committees.

The refusal of the members of the health team is related to their participation in any indirect action related to the VTP process, such as participating in the constitution of the ground, self-exclusion from the diagnostic process, for example, in the case of fetal non-viability, providing orally administered abortion-inducing drugs, or providing supplies in the ward (gauze and compresses). As one participant points out, diagnosis is inherent to healthcare, so refusal to participate is tantamount to a lack of service.

Another obstruction is lack of justification for conscientious objection,[11] allowing objection for convenience or false objection, as described here. According to the participants, if it

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[11] According to the current regulations, conscientious objection can be invoked without the need for argumentation. The only requirement is to fill out and sign a form with some socio-demographic information and indicate the grounds for objection, being able to declare oneself an objector on all grounds.

were a requirement to explain and justify the objection clearly, the number of objectors would probably decrease.

The participants, in a significant number of the institutions included in this study, mentioned that the identity of conscientious objector professionals and technicians is not public. In these circumstances, the psychosocial team is forced to infer or assume that the health team members are objectors, essentially through their behavior and attitudes regarding VTP. The importance of recognizing who are objectors lies in providing continuity of care to the pregnant person, avoiding referral to objectors to avoid inappropriate and persuasive treatment and other complex situations that delay care or affect the freedom to decide about the VTP.

In some institutions, the creation of or consultation with *expert committees* appears to hinder the constitution of the grounds. The referral and subsequent discussion of the person's situation as a clinical case with these committees result in the presentation of arguments and personal positions as objectors, delaying and/or blocking access to timely care. As a member of the psychosocial team points out, one example was the referral of a woman's case to the ethics committee of an institution.

Some quotations that show evidence of this category exists:

> *"We encountered the case of colleagues who wanted to withdraw absolutely from anything that had to do with the care of women who requested a VTP (.) Physicians have no reason to object to the diagnosis we make, it is implicit in our profession to make a diagnosis" (E5: Obstetrician/gynecologist, chief of service).*

> *"One of the things that at the beginning was a little difficult with the doctors, it did not matter so much, whatever the ground, as they were reluctant to raise the ground,[12] to put in the record the ground is raised, especially in the third ground" (E24: Supervising midwife).*

> *"They have told us: 'and who is going to give the patient the pills?' (.), or 'I cannot go in to give the compresses or gauze to the gynecologist in the ward'" (E18: Obstetrician/gynecologist, member of the health team).*

> *"The part of conscientious objection that is a piece of paper with a signature, without giving any explanation, is not asked (.). If we were stricter with conscientious objection, probably many would not have a real justification for doing so" (E18: Obstetrician/gynecologist, member of the health team).*

> *"We do not know who are conscientious objectors, but over the time we have been working we have already identified them and therefore we also try to get closer and do more teamwork with those who are not conscientious objectors because they are the ones who have the disposition, the skills they have been developing, little by little softer skills to be able to work better with the patients" (E9: Psychologist, psychosocial duo).*

> *"[The expert committees] (.) these intermediate bodies created ad hoc to obstruct, without being conscientious objectors, are there, they take different forms in the different services, in the different hospitals and I think it is unusual" (E16: Obstetrician/gynecologist, guild association).*

> *"(.) the treatment of this person is being in the XXXX hospital, because in my hospital there is no treatment for cancer, radiotherapy I think there is not. So, from XXXX she was referred to the XXXX hospital and there she was seen by the oncologist. This oncologist (.) at least in ground three he is an objector by word, because he is not registered in the paper (.) but he does have an issue with the abortion issue. Then there was another doctor who was the one who fought in the ethics committee so that the woman could have access. In fact, it is a cancer that is very advanced" (E7: Psychologist, psychosocial duo).*

Infringement of the rights of the pregnant person

This category emerges from the following codes: dissuasive and erroneous information, doubting the story, inducing a change in the decision, and delay in the constitution of grounds.

Although sexual and reproductive rights are a pillar in the struggle for gender equality, allowing women to stop being passive actors and recipients of public policies, empowering them to make decisions in an autonomous and informed manner, as was one of the objectives of the VTP law, in practice, complex situations arise that lead to infringement of the right of individuals to make decisions and access care in an efficient and timely manner. This is evidenced by the fact that objecting physicians provide dissuasive and erroneous information that induces people to change their decision to terminate a pregnancy. This attitude of the objectors also denotes the asymmetry of power manifested by how the way the information is handled.

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[12] The respondent in stating "to raise ground" means to constitute ground.

Regarding the account of the pregnant person in the case of ground of rape, the objectors, regardless of their gender, question and doubt the pregnant person, arguing that the woman may provide unreliable information to achieve an abortion in the face of an unwanted pregnancy.

Instances are described where an objecting physician has intervened directly, pressuring to induce a change in the person's decision, particularly in grounds 2 and 3, invoking arguments of a religious nature, such as the presence of a miracle that could occur and faith in God. This attitude generates internal conflicts in the pregnant person who questions their decision and the information received from the psychosocial team, for example, regarding fetal non-viability.

Another infringement of the rights of the pregnant person is directly related to the constitution of the grounds for VTP, an act that is delayed by the lack of non-objecting personnel, by requesting extra confirmatory examinations beyond the regulations or by additionally consulting more expert opinions than what is established in the legal norm.[13]

Some quotations that exemplify this category are as follows:

> *"The case that was really difficult for me to deal with, a 16-year-old minor, which was very complex (.) It was very bad in this case, the fact that the information was given by a person who was a conscientious objector made certain emphasis that made the patient change her mind (.) This emphasis on the possibility of the risks, of the sequelae that could result, in the end has played against patients who were already well decided and in the end made them change their mind" (E9: Psychologist, psychosocial duo).*

> *"There are conscientious objectors, especially in ground three (.), but it was a colleague who said she was going to be infertile, I don't know if it was a colleague or a midwife, but he told her she was going to be infertile" (E15: Obstetrician/gynecologist, member of the health team).*

> *"We have found many barriers, for example, the questioning of the woman, because she went to the rapist's house, what she was doing there, or that the testimony does not support rape" (E1: Male midwife, NGO accompaniment).*

> *"(.) the suspicion of what, ah? that she was wearing short skirts, that she was raped or what? Those comments still occur and the question 'where were you, and what were you doing?'" (E35: Obstetrician and gynecologist, VTP coordinator)*

> *"One female doctor in particular, who after we had constituted a third ground, took a patient out of the hospital room and took her to tell her what had happened so she could believe her, and that was something that caused us quite a problem, an ethical conflict, and well, that was the only abnormal and worrying situation we experienced with the ground, but we had to make several changes there as well, telling them that it was not their role, to believe or not to believe, but that as public officials they should attend to the patients and if we are telling them and if this woman is saying that she was a victim of rape and this is a pregnancy resulting from rape, it is the right thing to do, she has the right to terminate" (E37: Social worker, psychosocial duo).*

> *"It was in ground two, the patient had decided to terminate the pregnancy and she [doctor] approached her to talk to her about her decision (.) and told her to think about it carefully and that she had to have faith, that miracles happen, things like that, so that she would change her decision, so she obviously got very confused and had the feeling that everyone else had lied to her and that there was hope. When it was not real!" (E38: Psychologist, psychosocial duo).*

> *"In the institution where I am currently working, there is only one conscientious objector, so the implementation of the law is much more efficient, there will not be a patient who has to go through, I don't know, several shifts or that there is no one who can perform the abortion, unlike other places where there are days when there is no one who can perform it" (E18: Obstetrician/gynecologist, member of the health team).*

> *"Some people in the health professions hinder the establishment of the ground link by asking for extra lab tests, for example, if they need a diagnosis, they ask for two diagnoses, if they need a diagnosis from not a specialist, only from an internist or general practitioner, they usually ask for a specialist's diagnosis, they ask for more tests than necessary, they delay the constitution of the ground" (E39: Psychologist, accompaniment NGO).*

Pseudo conscientious objection

In this category, the associated codes are false conscientious objection and conscientious comfort. False conscientious objection emerges from the discourses of the participants who in clinical practice identify a covert conscientious objection, for their convenience, out of idleness, without moral support, reactive and arbitrary, evading their professional responsibility.

As a consequence, what the participants call "conscientious comfort" arises, wielded by health officials as a response to

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[13] For the constitution of the grounds, the law establishes the following: In ground 1, the respective medical diagnosis must be available; it does not indicate that other specialists must be consulted. In the case of ground 2, there must be two specialist medical diagnoses (understood as obstetricians/gynecologists). In ground 3, a health team will confirm the concurrence of the facts and the gestational age.

the complex values involved in abortion because they do not have the knowledge to diagnose ground 2, to avoid getting involved in legal issues related to ground 3, or as a refusal to carry out administrative activities, such as filling out forms. In short, there is a delay in the woman's care and an overload of work for non-objectors, as detailed in the following quotations:

> *"Those who were making a conscientious objection out of convenience, because we found colleagues who wanted to withdraw absolutely from anything that had to do with the care of women requesting VTP" (E5: Obstetrician/gynecologist, chief of service).*

> *"Many colleagues probably did it to avoid getting into trouble and, forgive me if I am wrong, even out of laziness" (E13: Obstetrician/gynecologist, chief of service).*

> *"So, he would say 'no, you know what, I'd rather not have problems and not get involved in this,' and he would pass the responsibility to someone else and declare himself an objector" (E26: Hospital director).*

> *"It is not a glamorous subject, it is not like fetal laser, it is not like echocardiography, it is something that is hard, it is uncomfortable and I think that for many, one of the things that obstructs, perhaps more than conscientious objection is what I call conscientious comfort, in the sense that the doctor sees that it is something complex, a little out of comfort, a little because he does not know, he does not have enough knowledge,[14] then a kind of rotation of patients begins, a kind of pilgrimage of patients who go from one place to another (.) and this is not even conscientious objection, it is convenience, convenience because they do not know about it, it is an uncomfortable issue, we have to fill out paperwork, so we refer them to the other and this also wastes time" (E14: Obstetrician/gynecologist, chief and member of the health team).*

> *"The reason of those who signed for the third ground was: why am I going to get into legal problems" (E16: Obstetrician/gynecologist, guild association).*

> *"Doctors who are objectors and what I feel is that suddenly they don't want to take charge of this, it's like no, so much paper, so many things, so much controversy they generate" (E7: Psychologist, psychosocial duo).*

> *"Because the fact of not getting involved in anything at all is very comfortable, and that can't be, because it also passes the workload unto others" (E5: Obstetrician/gynecologist, chief of service).*

Reorganize the healthcare

Health teams have had to readjust shifts and replace the functions of objectors with non-objecting personnel, appealing to the companionship and commitment of other professionals. Situations are described in which non-objecting personnel must attend outside working hours to avoid referring the woman to another healthcare center. The psychosocial accompaniment team has also had to seek care from non-objecting staff, with the inconvenience of rescheduling the woman's care for another opportunity. As it can be seen from the following quotations, the most significant impact of conscientious objection occurs in the case of pregnancy due to rape (ground 3).

> *"As in all other places, ground three has been the more complex one here (.) It is a condition in which conscientious objection from the obstetric group has appeared and certain arrangements had to be made for the distribution of shifts so that there would not be any shift with only conscientious objectors for ground three or for any of the other grounds" (E17: Neonatologist).*

> *"I have found myself in a situation in which I have had to put together a different team, like ah, I have to do an MVA,[15] so who is the anesthesiologist? oh, you know, it turns out that the anesthesiologist is a conscientious objector. Calling a friend, 'can you come and help me' (.) They tell you 'the nurse who is in that ward is an objector,' so they will have to find another nurse from another ward (.), or look for a surgical instrumentalist because there are a couple of them who are objectors and do not want to participate. So, things have to be arranged, but it will also depend on whether there is someone who says 'well, we have to do it' and not 'oh no, most of them are objectors, so we'd better refer them'" (E18: Obstetrician/Gynecologist, member of the health team).*

> *"I remember that during the pandemic,[16] I once had to come and place the patient, we did not know that a replacement physician was a conscientious objector and the other physician who was there on the weekend was also an objector and I came on a Saturday to administer the drugs in this situation" (E13: Obstetrician/gynecologist, chief of service).*

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[14] The interviewee refers to the constitution of ground 2.

[15] Manual vacuum aspiration. A procedure used for VTP.

[16] The participant refers to the SARS-CoV-2 pandemic.

> *"We have tried to coordinate with those specific doctors, for example, that the patient should not be scheduled for that day, because that doctor is going to be there that day, so he may say no, it is better for this day, because he does not have any problems. So, we try to coordinate everything, to prevent the patient from having to delay so much, that she comes, and then she is hospitalized but nothing is done, so we try to do this so that she also has good care here at the hospital" (E10: Social worker, psychosocial duo).*

Regulating the practice

According to the participants, it is necessary to substantiate conscientious objection and make the identity of those who invoke it known, limiting it to those who perform a direct and specific action, for example, only to the obstetrician/gynecologist required for the procedure. Similarly, there is a need to promote professional engagement to comprehensive care and respect for women's autonomy, acting as guarantors of the exercise of this right in the event of possible infringements.

In order to promote the proper functioning of health teams, objection should not act as an obstructing agent, respecting the diversity of thought of its members.

Due to the existence of local particularities in the health institutions that would not be explicit in the general norm (Ministry of Health Chile, 2018a), local protocols and the creation of expert committees as facilitating bodies have been considered to support the constitution of the grounds, without interfering with the right of the pregnant persons to exercise their will freely.

The following quotations reflect this category:

> *"I would leave only the real conscientious objectors, in their right to object, very well explained and very well grounded" (E16: Obstetrician/gynecologist, guild association).*

> *"It is absolutely transparent, we have no concealment, this information is handled by the midwife manager of the inpatient unit and she has the list of what is happening in terms of conscientious objection, and sometimes there have even been changes[17] by the doctors themselves" (E23: Obstetrician/gynecologist, chief of service).*

> *"The other participants in the ward, for example, it seems to me that a surgical instrumentalist or a ward attendant, or a nurse, or a nurse technician that is supporting the anesthesiologist or the anesthesiologist, it seems to me that they should not be conscientious objectors, because the one who performs the medical act in this particular case is the obstetrician/gynecologist" (E13: Obstetrician/gynecologist, chief of service).*

> *"There was a doctor who flew the flag and argued in the ethics committee in favor of the possibility of constituting the ground, that it should be what the woman decided" (E7: Psychologist, psychosocial duo).*

> *"We have had a team that has worked well, that has worked well on this and I have not seen major difficulties and in fact my colleagues have also been very respectful with those of us who are objectors and who do not participate" (E4: Obstetrician/gynecologist, member of the health team).*

> *"We applied the national regulations directly, we did not make any local adaptations. But now we have encountered certain particularities that are making it necessary for us to create a local protocol, basically to have a road map of what to do in each case" (E5: Obstetrician/gynecologist, chief of service).*

> *"We set up a small committee to analyze each patient for ground two (.), those who were objectors realized that they could be objectors without the need to become obstructers (.). I think we have achieved at least, I speak for the committee of this institution, a certain maturity. I do not remember that we have had an experience with any woman who has made us see that she feels that this committee has played a role in restricting her exercise of will" (E17: Neonatologist).*

Management roles

From the interviews, it is clear that managers must ensure compliance with the law, acting as guarantors of patients' rights and playing a facilitating role in implementing a public policy. One participant's account reflects situations in which a manager is a conscientious objector and obstructs the rights of clients by refusing to provide care and excluding team members in the discussion of cases.

The participants point out as a fundamental aspect that managers, even if they declare themselves a conscientious objectors, are not exempt from their administrative obligation and must ensure compliance with the law in the institution or unit under their charge. The need

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[17] The interviewee refers to variation in the ascription of objectors to one or more grounds.

to hire non-objecting personnel is also considered within this role.

> *"There was a change in the head of the high obstetric risk unit and the doctor who took over as head is very—I think he is the worst of the objectors here—very abusive, not only with regard to VTP issues but also with regard to patients who are admitted for sexual violence and he tries to get them out of the way so as not to attend to them (.) In trying to ensure rights, I think he is one of the obstacles to rights, so when he took over as director, the meetings kind of dissipated, they stopped for a while, and when they were held again, we were never invited again" (E6: Social worker, psychosocial duo).*

> *"As a director I am an objector, but I have a tremendously respectful position of the patients' decision and that I am working in a public system and that this is a patient's right to decide and my obligation is to comply with the law and make sure it is well complied with" (E14: Obstetrician/gynecologist, chief and member of the health team).*

> *"As a hospital director, in that role, I should have gone out to look for obstetricians/gynecologists who were not conscientious objectors, in order to have this service, which is a right for women in our hospital (.). I have a responsibility as director of an institution that in the face of the implementation of a law, which is a right that has been achieved, I have to provide the facilities so that this law can be implemented. I do not have to be a barrier as director, so I have to make my efforts to be able to complement the colleagues I have today so that this law can be implemented in a good way" (E26: Hospital director).*

Training

The training of health team members is considered another fundamental aspect. The participants pointed out that activities should be included that, in addition to addressing the content of the law, encourage internal discussion, especially regarding the existence of false assumptions (myths) and apprehensions about abortion and the VTP law. One of these false assumptions was the belief that women would saturate health services to have an abortion, which led to the appearance of prejudices on the part of health personnel and a negative predisposition, favoring the invocation of the condition of objectors.

Adequate training could help reduce the number of objectors since there are cases in which objection is invoked because of a lack of understanding of the regulatory framework and the process of implementing the law. The lack of training in ethical aspects is recognized, and training that includes the gender perspective and the rights approach is advocated, promoting humanized and empathetic care by the health team and respecting the autonomy of patients to decide about their own bodies.

> *"At the beginning of this law there were too many myths (.), besides the xxxx region is an area that is quite conservative in some sectors, there were many apprehensions. It was one of the places in which there were colleagues who thought that there would be an avalanche of women for ground 3, so we began to demystify it, we began to clarify what conscientious objection meant in itself" (E5: Obstetrician/gynecologist, chief of service).*

> *"Many decided to conscientiously object because they did not understand the process very well, and once the process is explained, conscientious objection is no longer" (E1: Male midwife, NGO accompaniment).*

> *"We lack a little bit of that, the perinatal obstetric part. We need more education in bioethics" (E13: Obstetrician/gynecologist, chief of service).*

> *"Health personnel must be educated in humanizing health, that they should not forget that behind the clinical record there is a real person, that the body is hers, that this is happening to her, that she is the one who has to live with this (.) So I think we need to humanize and start from there and give more emphasis to the rights that women have especially as patients, that the decision in the end is theirs" (E38: Psychologist, psychosocial duo).*

Ensuring compliance with the law

Some consider a conscientious objection to VTP as a privilege, and therefore, it should be incompatible to the tasks required in the profession, especially in public health institutions, which are responsible for the care of the most vulnerable population, who do not have the possibility of choosing an individual or institutional provider.

In order to ensure adequate compliance with the law, several proposals emerge from the participants, such as the choice of the place of employment of those who object, limiting the number of objectors, establishing a system for monitoring compliance with the law and the elimination of individual and institutional objection in the implementation of public health policies, and not imposing a particular morality that conflicts with access to services related, in this case, to VTP.

> *"If we say that conscientious objection is a privilege, when I want this privilege to work in my favor, then I have to leave an institution that provides this service (.)" (E16: Obstetrician/gynecologist, guild association)*

> *"In the public system there should not be conscientious objectors, because we can choose where to work, so if you are so committed to your beliefs, go to an institution where everyone agrees with that, that line of thought, because our patients cannot choose" (E18: Obstetrician/gynecologist, health team member).*

> *"I would implement a strict surveillance system and a sanction for those public or private institutions that are obstructing the law in any way, because without a sanction it will not work" (E16: Obstetrician/gynecologist, guild association).*

> *"If it were within the framework of the law we currently have, I would eliminate institutional and personal conscientious objection, at least in public health, because I believe that public policy cannot depend on the morality of the people who must guarantee access" (E6: Social worker, psychosocial duo).*

Meta-categories

This section describes the two meta-categories that emerged from the codes presented previously: conscientious objection as structural violence and strategies to minimize the impact of conscientious objection.

The first meta-category, "conscientious objection as structural violence," derives from the following categories: barriers to the implementation of the law, infringement of the rights of the pregnant person, and pseudo conscientious objection (**Table 1**). In the process of constant comparison, conscientious objection can be distinguished as a central theme in which the categories mentioned before converge.

In this meta-category, conscientious objection acts as structural violence, supported by the current legislation that allows broad objection for members of the team who participate indirectly in the process of termination of pregnancy.

Structural violence occurs because the institutional system and society allow women's rights to be infringed by barriers related to access to services guaranteed by the VTP law, such as timely care. In this sense, considering that in the law, there are specific deadlines related to gestational age, as in the ground of rape, if the deadline is exceeded, the person will not be able to terminate the pregnancy, and it is vital that the care be timely and efficient.

In the interviews, the need to have had to take specific measures to avoid a delay in care is described. This delay is manifested by the lack of availability of non-objecting staff and the demand for additional examinations or unnecessary referrals to other specialists to constitute the ground for the interruption.

It also emerges that objectors try to condition the woman's intention to terminate her pregnancy, by directly obstructing her decision and pressuring her to modify it, imposing their own beliefs in a clinical intervention where power relations are manifested, or even alluding to the occurrence of a divine intervention, as can be seen from the participants' accounts.

Some health personnel subscribe to conscientious objection without necessarily having a religious or value-based vision that coincides with a moral foundation, giving rise to a false objection or pseudo conscientious objection, which translates into non-compliance with professional duties.

The second meta-category, "strategies for minimizing the impact of conscientious objection," emerges from the following categories: reorganize the healthcare, regulating the practice, management roles, training, and ensuring compliance with the law (**Table 1**). It emerges as a response to prevent conscientious objection from acting as structural violence.

It is important to note that this meta-category is derived from the voice of the participants, who are directly involved in the care of pregnant people. The strategies mentioned can be structured into those related to human resources, regulation of healthcare, and administrative management. It is also noted that many of the actions are subject to the willingness of non-objecting personnel and their commitment to women's rights. Likewise, there is a need for the managers of health institutions to play a more active role as guarantors of rights, promoting a local organization that ensures compliance with the law and focusing on the care of the pregnant person.

The participants question individual and institutional conscientious objection since it constitutes a barrier that underlines the structural violence against women, so some explicitly recommend its annulment within the current legislation.

Discussion

Abortion continues to be a complex issue, where health, ethical, religious, legal, social, cultural, and political dimensions are intertwined. In Chile, the regulation of abortion (from its absolute prohibition to its recent decriminalization on three grounds) obeys to public interest and political control of life through power relations, which are not always visible. In this sense, in Western societies, the consideration of sexuality only for reproductive purposes and the disqualification of sexual pleasure have been present since ancient times, introducing mechanisms that begin to operate as a device for controlling the population through their sexuality (Foucault, 2013a,b, 2016).

The control of sexuality gives rise to power relations that act strategically in the social environment, influencing the formulation of laws, the State apparatus, and social hegemony, tending to monitor and control the population's behavior within capitalist society (Foucault, 2013a,b, 2016).

The social control of sexuality, this government of consciences through ideology, across a conservative morality that seeks to control, manage and regulate moral conduct, has contributed to the stigma and criminalization of abortion. Unfortunately, Chile is not the exception, reflected in the positioning of conscientious objection as a right and its extension to health institutions and those who indirectly participate in the procedure of termination of pregnancy, which was raised as one of the main strategies to prevent the enactment of the law.

Regarding conscientious objection, some defend it by considering its derivation from freedom of conscience, understood as the "attribution of having and manifesting the inner convictions on which personal acts are based (.), in accordance with the judgment of one's own reason by which the moral quality of such actions is recognized, without being disturbed by others or by public authority" (Royal Spanish Academy, 2022). This argument justifies the refusal to participate in ethically reprehensible activities during professional practice, such as the participation and use of scientific knowledge by health personnel in procedures such as torture and other cruel, inhuman, and degrading acts[18] (Faundes et al., 2013). However, conscientious objection cannot be invoked as a refusal to directly or indirectly perform the actions contemplated within the benefits that have been legally admitted in a country and even less to obstruct the exercise of the right of the population to access them. We consider that here lies the main "problem of conscience" of health personnel, when they impose their personal beliefs or values over their professional duty to promote wellbeing, safeguard the health, and prevent the occurrence of harm to people (FIGO Committee for the Study of Ethical Aspects of Human Reproduction and Women's Health, 2012; Faundes et al., 2013), particularly those who work in the public service that receives the most vulnerable population.

As Zaami et al. (2021) argue, even though conscientious objection to abortion has been legally recognized by 24 member States of the European Union, the United Kingdom, Norway, and some cantons of Switzerland, the European Court of Human Rights recently established that abortion is a medical act and the State must guarantee access to all persons who legally request it. Sweden is one of the few countries that does not allow conscientious objection. The Swedish court dismisses the admissibility of these situations stating conscientious objection exceeds the respect for the freedom of conscience of health professionals because the individual prerogative cannot be over and above the right to healthcare of those who wish to terminate a pregnancy (Zaami et al., 2021).

As Stuart Mill points out, living in society imposes a line of conduct based on not harming the interests of others, interests that have been recognized as rights by a legal provision or by a tacit agreement (Mill, 2011a). The principle of complete freedom of action is limited to the extent that it only interests and affects one's own person without harming others. In both cases, a person may harm another by the person's actions and omissions, responsible for the damage that occurs (Mill, 2011b). This responsibility of those who participate in and oversee healthcare seems to be diluted in the face of conscientious objection, which, as can be seen from our results, contributes to a great extent to infringement of the autonomy and rights of pregnant persons concerning their sexual and reproductive health.

On the other hand, the lower number of cases of VTP than projected and the difficulty in obtaining official information on the prevalence and characteristics of objectors (Montero et al., 2021) prevent us from knowing the real magnitude and consequences of conscientious objection. In Chile during the period 2018–2021, a total of 3,009 cases are registered, with 931 cases for ground 1, 1,536 cases in ground 2, and 542 cases for ground 3 (Ministry of Health Chile, 2022a), figures much lower than the 2,550 cases estimated annually during the legislative processing of Law 21,030 (Castillo and Robledo, 2016).

Regarding the arguments invoked for conscientious objection, previous research reveals that the main motivation derives from a negative evaluation of abortion and religious considerations based on respect for human life from conception to natural death. There are specific arguments for objecting, as of ground 2, where the physician's commitment to protecting the lives of two patients and considering the fetus as a terminally ill person who deserves palliative care, instead of termination of pregnancy. In ground 3, the majority of conscientious objections invoke arguments without moral support, derived from mistrust of the pregnant person who is a victim of sexual violence and the consideration of the embryo/fetus as a human being without biomedical pathology that justifies the abortion, perceiving it as an innocent victim of this violence (Montero and Ramírez–Pereira, 2020; Ramírez–Pereira and Montero, 2021).

As the results presented here show, even though there are public health institutions that have tried to regulate their exercise, there are others where power relations are perpetuated, where conscientious objection operates as a denial of service, obstructing the implementation of the law and

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[18] Only on 11 November 2016, Law 20,968 which criminalizes the crimes of torture and cruel, inhuman and degrading treatment, was enacted in Chile.

infringement of the right of a pregnant person to quality, timely, and efficient care.

Consequently, based on the findings of our research and the incorporation by the State of conscientious objection as a right and its extension to other actors and health institutions (Ministry of Health Chile, 2017), we can conclude that the current exercise of conscientious objection in Chile, by interfering with the duty of care of health personnel and the right of individuals to VTP, would operate as a form of structural violence, acting as invisible violence, which responds to systemic processes with negative effects on the wellbeing and freedom of pregnant people, causing dissatisfaction of their needs (La Parra and Tortosa, 2003; Farmer et al., 2006). In short, the exercise of conscientious objection, by acting as a barrier, would act as a hegemonic, hidden, indirect, and institutionalized violence derived from power relations that affect decision-making and infringement of the right to access the legally established benefits related to VTP.

It is essential to prevent conscientious objection from becoming a control device that acts as a barrier, contravening the autonomy of the pregnant person, limiting their right to safe termination of pregnancy, infringement of their dignity as a person, and exposing them to harm to their health and life. Therefore, strategies should consider objection as a limited and exceptional resource. One of them would be to appeal to the moral conscience of those who declare themselves objectors, inviting them to reflexively consider, as an examination of conscience, their official duties and their work assignment, especially in the public service, responsible for providing care to most of the population of the country. It is also relevant to contribute to the social destigmatization of abortion, by training future professionals and current members of health teams, including the acquisition of competencies not only regarding the content of the law but also in the incorporation of skills that allow a more humanized and empathetic approach, which allows them to understand the issue of abortion beyond a binary perspective—referring to the imposition or prohibition—and respecting the self-determination of the pregnant person to decide freely on transcendental aspects of their biography, their health, and their life, according to their own convictions, beliefs, and values.

Finally, together with reviewing the imposition of conscientious objection in health as a right, we consider it urgent to regulate and supervise, free of ideological influences, its exercise in the health public and private sector. Bearing in mind the historical period Chile is going through, tending to reformulate its Political Constitution, the State, through its institutions, must fulfill its role as guarantor of the fundamental rights of those who live in a certain territory, especially of the most vulnerable people. Otherwise, it will incur as an actor responsible for the perpetuation of structural violence. Even though organized civil society has a preponderant role in defense of sexual and reproductive rights, we ratify the approach to the obligations of the State toward citizenship (Montero et al., 2017; Montero and Villarroel, 2018).

Data availability statement

The datasets presented in this article are not readily available because, as approved by the Ethics Committee and the commitment to the participants to protect their confidentiality, the interviews cannot be shared. Requests to access the datasets should be directed AM, amontero@uchile.cl.

Ethics statement

The studies involving human participants were reviewed and approved by the Ethics Committee for Research on Human Beings, Faculty of Medicine, University of Chile. The participants provided their written informed consent to participate in this study.

Author contributions

AM and MR-P made substantial contributions to the conception and design of the work, conducted the interviews, drafted the manuscript, and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. All authors participated in the coding process, analysis, interpretation of the data, critically reviewed the manuscript, provide approval for publication of the content, and contributed to the article and approved the submitted version.

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Conflict of interest

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

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Primary health care, access to legal abortion and the notion of ideal victim among medical practitioners: The case of Chile

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In 2017, Chile enacted new legislation allowing access to legal abortion on three grounds, including rape. This article summarizes a qualitative, exploratory study that examined the role of primary healthcare services in the treatment of rape survivors in order to identify challenges and strengths in accessing legal abortion. The relevant data was collected through 19 semi-structured interviews conducted with key informants. The angry legislative debate that preceded enactment of the 2017 abortion bill evidenced the presence of strong biases against survivors of sexual violence. At the time, abortion opponents sought, *inter alia*, to discredit women who report rape, arguing that such claims would be misused to secure illicit abortions. In actual fact, however, rape has turned out to be the least used of all grounds for abortion, with girls and teens making up the smallest group of seekers. This article presents our findings on rape-related issues, notably the biases and shortcomings of medical practitioners regarding the new abortion law. We noted with concern their failure to screen for sexual violence and propensity to stigmatize the victims, a phenomenon that becomes exacerbated when it involves particularly vulnerable populations, such as girls and women who are poor, homeless, migrant, or who abuse alcohol or drugs. We further noted that prevalent stereotypes based on the notion of the *ideal victim* can revictimize girls and women and work to defeat the intent of the law. In Chile, the primary healthcare system is a key point of entry for abortion. In this highly charged arena, however, lack of political will, compounded by the COVID-19 pandemic, have kept health care practitioners from undergoing timely, gender-sensitive training on the new law, a key requirement for ensuring dignified care and respect for women's rights. We conclude that if government policy is to prevent multiple, intersectional discrimination, it must recognize the diversity of women and adapt to their specific contexts and singularities.

KEYWORDS

Chile, rape, stereotype, abortion, primary health care, ideal victim

Introduction

Law 21030, an Act on the Voluntary Termination of Pregnancy (the VTP Act), was enacted in September 2017. The law amended Health Code Article 119 in order to allow women to terminate pregnancies in cases of grave risk to life, severe lethal fetal impairment, or rape. The angry legislative debate that preceded enactment of the bill evidenced the presence of strong biases against survivors of sexual violence, referred as victims in the law and all the regulations. Abortion opponents sought, *inter alia*, to discredit women who report rape, arguing that such claims would be massively misused to secure illicit abortions. Yet, rape has turned out to be the least used of all three grounds. As official Health Ministry data from January 2018 through October 2021 shows, only 464 of 2,303 abortions under the new law were performed on grounds of rape and a mere 125 seekers were under 18.[1]

The VTP Act introduced into Article 119 of the Health Code a new paragraph that requires teams of health workers to confirm the alleged facts and the gestational age, then advise the person seeking an abortion or her legal guardian (in case of girls under 14 years old or a woman with cognitive disability) and the area hospital within 24 h. If the seeker is under 14, rape is a statutory offense under Article 369 of the Criminal Code and hospital and clinic directors are required to notify the National Children's Service and the Office of the Public Prosecutor to begin criminal proceedings. Prosecutors must also be notified if a victim is over 18 and the rape has not been reported so that criminal proceedings can be considered.

Under the comprehensive care and counseling guidelines issued by the Health Ministry for cases under the VTP Act, requests for abortion on grounds of rape must be substantiated by a secondary-tier facility[2] such as a high obstetric risk clinic or similarly specialized unit, depending on the patient's insurance coverage or the nature of the emergency (Government of Chile, Undersecretariat of Public Health, 2018, p. 77). Pregnancy termination itself is performed at a tertiary facility. The guidelines also require the primary tier to act as the point of entry for women requesting access to services under the VTP Act. The primary tier encompasses Family Health Centers, Family Health Community Centers, Primary Emergency Care Services, Rural Health Emergency Services, and Critical Care Emergency Services. These facilities are required to screen for and determine if grounds to suspect rape exist, offer patients accurate, timely and truthful information concerning pregnancy termination, and deliver support and counseling designed to help women disclose events of sexual violence (Government of Chile, Undersecretariat of Public Health, 2018, pp. 21–22).

This article presents our findings concerning rape cases, especially how survivors of sexual violence can turn into "ideal victims" in the eyes of medical practitioners. It reviews their gender biases, failure to screen for violence, and tendency to stigmatize women who request pregnancy termination –behaviors that can be exacerbated when involving some particularly vulnerable populations, including girls and women who are poor, homeless, migrant, or who abuse alcohol or drugs. The term *ideal victim* was coined by Nils Christie in 1986 to describe the stereotypical ways in which victim status is ascribed and how such stereotypes are legitimized. As Christie notes, the ideal victim is "[T]he tiny old woman who comes home in the middle of the day after caring for her sick sister. She is attacked by a man who hits her over the head and then steals her wallet to spend the money on drugs or alcohol" (pp. 276–277). To Christie, the discursive construction of the status of ideal victim has the following characteristics:

> (1) The victim is weak. Sick, old or very young people are particularly likely to be ideal victims. (2) The victim was carrying out a respectable task -taking care of her sister. (3) She was where she could be without any inconvenience -on the street and in the daytime. (4) The criminal was large and mean. (5) The criminal was a stranger to her (1996, p. 277).

Stating that an "ideal victim" is the product of social and cultural stereotypes implies that the ways bodies and their sexual or gender assignments are understood belong within a certain point of view, historicity, and system of representation. The concept of gender, as expounded by Money (1995) in the biomedical sphere, was an analytical tool intended to understand sexual representations through rules, conventions, norms, and institutional practices linked to culture rather than to biology or to a predetermined nature. In this perspective, sex is a biological reality imposed at birth that culture can modify through gender (Money, 1995). To most feminists, the biological basis for sexual difference is not a product of nature on which a set of cultural practices are accommodated; rather, sexual differences themselves are a construct produced and developed by cultural practices; they are the effect of discursive precepts historically established through gender. As Butler points out: "Gender ought not to be construed as a stable identity or locus of agency from which various acts follow; rather, gender is an identity tenuously constituted in time, instituted in an exterior space through a stylized repetition of acts" (Butler, 2016). Gender is the cultural performance of reiterated acts that define the essence of being a woman or man –both the differences that divide the social corpus into sexes as well as the norms, attitudes, values and expectations that regulate the cultural repertoire of discursive identities, signs, and practices of males and females. As Lamas notes:

> Gender roles are configured by norms and prescriptions dictated by society and culture regarding female or male

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[1] See data set at https://www.minsal.cl/reporte-ley-ive/.

[2] Chile has a tiered system of healthcare delivery encompassing private and public components. Public health operates under the National Health Service based on degree of complexity: (a) Primary outpatient care; (b) Secondary or specialized care); and (c) Tertiary care.

> behavior. Although these vary across cultures […] at their most basic, differences match primitive sexual divisions of labor: women give birth to and take care of children, therefore, femaleness is maternal and domestic while maleness is public. The male-female dichotomy, with its cultural variants (of the yin and yang type), creates stereotypes, more often than not rigid, that condition roles and limit human potential by stimulating or repressing behavior depending on gender appropriateness (Lamas, 2006, p. 36).

In Christie's terms, "the ideal victim" is a privileged class of victim who is intersubjectively recognized on the basis of gender biases and stereotypes that impart legitimacy and create a reality. As Cook and Cusack (2010) explain, gender stereotypes are a set of beliefs about the characteristics of maleness and femaleness. "Beliefs can cover a range of components, including personality traits, behaviors and roles, physical characteristics and appearance, occupations, and assumptions about sexual orientation." (p. 23). The gender attributes of an ideal victim –weakness, respectability, innocence– are assumed by social norms and significations in such a way that culture itself strengthens and repetitively idealizes them as the essence of maleness or femaleness; as a truth prior or external to the cultural construction of sexual difference. The ideal victim is thus an instrument for discrimination for both the dominant modes of inclusion and legitimization and for delegitimization or withholding of victimhood. Anyone failing to meet certain real or imagined gendered norms and social expectations will find it particularly difficult to access the rights and protections of victim status. In this study, the objective was to inquire about the implementation of the abortion law, the flow of care and referrals for women and to identify the main difficulties and strengths in access to services. The results revealed that the notion of "ideal victim" emerged time and again. Below we explain the research methodology and our findings.

Methodology

This article summarizes an exploratory, qualitative study that examined health issues based on the experiences and reports of key actors. The researchers, once situated within the context that created the phenomenon (March et al., 1999; Amezcua and Gálvez, 2002), collected relevant data through 19 semi-structured interviews with a cross-section of (a) Primary-care physicians and midwives; (b) Teams of social workers and psychologists -known as the psychosocial team- in secondary and tertiary care who have direct contact with primary-care health personnel for the VTP act cases; and (c) Two Health Ministry officials responsible for health system management. Units of analysis with a relevant professional role in voluntary pregnancy termination were identified through purposive, non-random, snowball sampling (Martínez-Salgado, 2012).[3] All respondents practice in Metro Santiago, home to over two-fifths of the country's population.[4] Interview criteria were pre-tested for flexibility and adaptability as fieldwork required and the proposal was vetted by the Research Ethics Committee of the Law School at Diego Portales University.

Interviews were conducted from November 2019 through December 2020. Due to the SARS-CoV-2 pandemic, effective March 2020 all interviews were moved online or conducted over the telephone. The interview questionnaire was developed through a conceptual operationalization of the research objectives, identifying various dimensions, such as: implementation of the law, difficulties/barriers to access an abortion, screening sexual violence, early detection of situations covered under the law, patient care and referral, among others. In addition, we considered the outcomes of previous studies on the implementation of the law.

Field notes were complemented by audio recorded with explicit respondent consent and sufficiency of data was determined under saturation criteria (Martínez-Salgado, 2012, note 20). All data was then analyzed for semantic content (Amezcua and Gálvez, 2002, note 18) and coded in ATLAS.ti 8.0 software for ease of systematization. Transcripts were processed through inductive coding to identify the categories and subcategories that answered the research question and met the goals stated in the study's theoretical framework (Palacios, 2012).

Findings

Stereotypes, biases, and stigma surrounding sexual violence in primary healthcare

The social and gender practices, beliefs and prescriptions produced by the discourse on sexual differences and gender roles were observed to have strong roots among primary health care practitioners. As a midwife noted,[5] *"As in the past, women to them are not a whole complement or complete human beings. They're just vaginas, tits, and pregnancies."* Indeed, abortion seekers whose life experiences do not conform to dominant gender norms all too often face biases and stereotyping. As reported by one interviewee, women who request abortions often experience value judgments about their plight and are blamed for their pregnancies or for the sexual assaults they have endured:

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[3] Secondary and tertiary care teams of psychologists and social workers were deemed key informants as they interact directly with primary care and can offer an outside view of it.

[4] Population of Chile: 17,574,003. Population of Metro Santiago: 7,112,808 (40.5%; 2017 Census).

[5] In Chile, midwives are university-trained practitioners whose role includes providing sexual and reproductive health care to women throughout their life cycle.

> *Midwives in primary care -not just because of lack of knowledge but also because of a tendency to blame women over sexual and reproductive health violence- […] are very judgmental of cases involving the [VTP Act]* (team member, social worker).

This is especially relevant where girls and teens are involved. A midwife reported having seen a 14-year-old who had become pregnant after "dating" a grown man, noting that some parents will normalize and overlook such relationships through stereotyped images of early sexual activity.

> *The girl said she'd had her first sexual experience with a guy who was about 22-23. Her mother cried her eyes out, saying she just could not believe that her daughter had started having sex at such a young age […] but she then turned around and sort of normalized it by saying "My daughter also kind of likes fooling around and dressing suggestively. She loves acting grown-up* (team member, midwife).

As regards the mandatory reporting of sex offenses, this midwife also noted that some police officers will replicate stereotypes about a teen's sexual experience, even presuming sexual consent if she is seen to be leading a "licentious life": *"A cop said something like 'Why bother? The girl's going to get called in to make a statement, maybe they'll ask you to give one, the girl will say it was consensual and that'll be it, case closed'."* Despite these stereotypical responses, the midwife said that the key reason to file a report is a perceived need to avoid liability, regardless of a patient's claims of consent:

> *The parents didn't want me to file a report because they just wanted the guy to go away. They said they'd look after their girl and her baby. But as a midwife working with sexually active teens, whether I want it or not, I have to report in order to protect myself […] I have to, whether the mother or the girl agree* (midwife).

Stereotypes about motherhood as the quintessential female identity also have a direct impact on the care being provided, regardless of age. Another midwife cited cases of 14-year-olds impregnated by their teenage boyfriends. Without inquiring too much into the context, she felt that these pregnancies were wanted: *"These girls have an option to claim the third ground* [i.e., *rape] but do not, because in fact they and their boyfriends planned to get pregnant and are very happy about it."* Another midwife concurred: *"We've had 12-year-olds who have had a baby and are happy about it […] They meant to become mothers* (midwife)".

To these midwives, a presumed yearning for motherhood seemed like an adequate proxy for consent. But such views, in addition to potentially covering up instances of imposed motherhood, stigmatize girls who do not conform to expected patterns of sexual behavior. As one of the midwives noted about her health team: *"Where minors are involved, my colleagues do not really broach these subjects. To them it's 'all right, you wanted it so it wasn't rape. Perfect'. It's like 'you asked for it'."* Biases and stereotypes on wanted or accepted motherhood may also result in the services contemplated in the voluntary pregnancy termination law being held back. A health team member relates:

> *When the hospital started to implement the law, it organized training sessions. At one such session we heard things like "A while ago we saw this girl who was pregnant as a result of rape but wanted to keep her baby, so we didn't report it."* (team member, social worker).

When pregnancy results from rape, the guidelines on comprehensive care and counseling require health institutions to provide biopsychosocial care, even if a woman has chosen to keep the baby (Government of Chile, Undersecretariat of Public Health, 2018, p. 83). But biases and stereotypes on teenage pregnancy, often compounded by inadequate practitioner training and unfamiliarity with the law, may result in noncompliance with the guidelines:

> *Health care providers widely believe that all rape cases under the law should lead to pregnancy termination; conversely, women who choose to continue their pregnancies are not VTP cases. In their view, rape equals women who don't want to be pregnant. That's the logic* (team member, social worker).

Abortion-related stigma also varies depending on urban or rural status. As one respondent noted, greater access to goods, services and resources can help city dwellers make more informed decisions: *"They're more empowered when it comes to their rights."* The very socio-spatial configuration of urban areas enables greater anonymity and prevents isolation and exclusion by home communities. This stands as a far cry from the reality facing women in outlying or rural areas, where sexual violence is more likely to be hushed or covered up outright:

> *[In rural areas] sexual violence in the home may not be more prevalent but it is more often swept under the rug. As such, if you don't see too many cases, you wonder why. We know there's a world of things we don't hear about but do happen out there* (team member, psychologist).

Mistrust and presumption of sexual consent

Women over 14

Interviews showed that gender biases and stereotypes can greatly impact access to services under the voluntary pregnancy termination law. Among some primary health care providers, institutionalized cultural patterns can lead to value judgments on women's characteristics, conduct and lifestyle, often resulting in dismissal of their accounts and in a tacit shifting of blame onto them. Key factors at play include dress, sexual conduct, seemingly reckless exposure to risk, socio-economic status, alcohol or drug use, and kinship with offenders.

Vulnerability as exposure to sexual violence and to labelling as an ideal victim

One health team member spoke to the credibility issues facing homeless alcohol or drug users. Her account illustrated how such women would not be regarded as an ideal victim in terms of accessing the abortion law:

> The attending midwife verified that the patient was pregnant. She cried and cried but said nothing. The midwife then told her: "You're using [drugs] and you live on the street. You need to be seen by a social worker. Just wait here." Once left alone, the patient slipped out. At no point did the midwife consider possible that the woman might have been raped (team member, social worker).

According to this respondent, the midwife not only failed to check if pregnancy was the result of rape; she also offered no guidance, no emotional support, and no information on the services contemplated in the abortion law. The respondent noted that such attitudes are not rare among some primary sector midwives. In another case, although rape had already been established at the secondary tier, when informing the primary health center by e-mail *"The attending midwife (…) warned that since these patients will say anything, we were not to just go ahead and believe them."* Poverty and irregular migration status only add to vulnerability. As a midwife pointed out, poor or migrant women are particularly exposed to sexual violence or to being coerced into sex.

> *Poor women are more likely to be sexual assault victims. A woman who can't afford the bus fare will be forced to walk alone at night; a woman who needs a job or a place to live may be forced to agree to certain conditions […] We see a significant share of migrants. We can only conjecture, but generally, being an illegal migrant or working low-paying jobs unfortunately places them at greater risk for sexual assault* (midwife).

A midwife recounts the case of a migrant woman who asked to terminate a pregnancy that resulted from having been raped at a social gathering: *"She went to this party, had too much to drink, and woke up being groped by a guy she did not know"* (midwife).

The plausibility of accounts

As the Health Ministry guidelines indicate, a crucial component of establishing the crime of rape is ascertaining the plausibility of victim accounts. *"We assess their bona fides […] We conduct interviews and determine whether grounds exist to suspect the crime of rape"* (team member, social worker). This raises questions about how to construe the plausibility test and the determination criteria used. Under the guidelines, in order to find whether events could constitute the crime of rape, health teams must review the person's accounts, notably the aptness of events to result in pregnancy and the correspondence between gestational age and the reported date of rape (Government of Chile, Undersecretariat of Public Health, 2018, p. 82). A team member explained that this step only entails taking the victim's statement and determining gestational age. To avoid revictimization, it does not involve judging the accuracy of the facts.

> *The interviews we conduct are only meant to determine the gestational age and whether events could constitute rape […] We are not judges and don't much believe in so-called medical committees […] It is quite intimidating already for women to have to convince three, four or five people of their stories, so we try to have a conversation in a safe, welcoming environment* (team member, psychologist).

Other respondents agreed that it is not their job to verify the truth of women's accounts before the crime of rape can be established:

> *As long as I'm able to provide the plausibility opinion I'm required to render, I just try to take down unprompted accounts instead of cross-examining women or delving too much into side events. Our job basically involves making a simple, broad-based judgment call; these aren't reports about extraterrestrials landing on Earth* (team member, psychologist).

Another health team member explains: *"The third ground [rape] requires accounts to be consistent with clinical findings,* i.e., *the event happened so many weeks ago and I'm so many weeks pregnant. If it is a consistent account, rape is judged to be likely."* That said, inconsistencies about the last menstrual period may sometimes cast doubt on victim accounts. *"Lots of questions can arise if a woman is unclear about her last menstrual period. In such cases dates need to be either approximated or based on an ultrasound"* (team member, social worker).

Victim credibility: The legitimizing role of filing a report

The voluntary pregnancy termination law requires public hospitals and private clinics to notify public prosecutors so proceedings against a suspect can be started (Health Code, art. 119(2)). The Act does not mandate reporting by the survivor for the crime of rape to be established. A team member noted that most women requesting pregnancy termination do not previously file a report with police or prosecutors: *"Most women 18 and up hardly ever do."* Another added that some prosecutors will require a written victim statement, even if she will not press charges:

> *A chief prosecutor who is very interested in these cases decided to use a statement format which is very similar to a police report […] He practically wanted victims to name the suspect and all that, but so far we've been able to steer clear of this requirement. But he did ask every hospital in the area to use the format* (team member, psychologist).

Clearly misinterpreting the VTP Act, some medical practitioners hold filing a report to be a precondition for accessing services under the law. Such unfamiliarity with the law often leads to needless exertions to validate victim accounts, including third-party referrals that only subject women to secondary victimization. Says one midwife: "*We explain everything to the girls, including that we are required to report the incident because of their age. We ask if it was really rape and if so, whether they agree to report it themselves. If they refuse, we report nonetheless.*" A primary-tier physician recalls the arduous journey a pregnant woman with disabilities had to undertake to prove she had been raped:

> The attending Ob-Gyn at the primary health clinic quite incorrectly told her she first needed to file a report. I can't recall if the woman went to the police first and then to the prosecutor's office or the other way around, but in short, she did both. Then a prosecutor sent her to the Forensic Medicine Institute for confirmation and a finding of rape. Starting at around 11 a.m., she spent the day going from the health clinic to the police, then to the prosecutor's office, and finally to the forensic institute before the crime of rape could be established, which finally took place at around 9 p.m. She immediately went to her local hospital […] where the medical team on duty went over her account and the legal steps she had completed, and agreed that the crime of rape had been established (Doctor).

Girls under 14

The accounts of especially vulnerable girls and teens are also often dismissed. A midwife cited the case of a homeless, pregnant 14-year-old who "*…had partied and used drugs with other teens. She had totally blacked out and did not recall who or how many she'd had sex with.*" When the girl walked in she was 20 weeks' pregnant, beyond the 14-week time limit set in the VTP Act (Health Code, art. 119). But instead of asking whether the pregnancy was the result of forced sex, the midwife chose to cast doubt on the facts provided by the girl because of her socio-economic status and sexual conduct: "*That's what she says. Truth be told, we do not know what really happened.*" To avoid being stigmatized by medical practitioners, victims will often deny the absence of consent. A health team reported the case of a 14-year-old who had been raped at a party, but after persistent grilling from a midwife, had changed her version of events and eventually retracted the request:

> *At the height of the pandemic I saw this 14-year-old girl […] who caught my eye: 14 and pregnant, that's statutory rape […] So, first the attending midwife talked to her. The girl said she'd been raped at a party where there was a lot of drug use. She was so out of it, she did not remember how many guys she had had sex with. […] According to her, everyone at the party was underage, but we obviously don't know that for a fact. When we explained that we'd have to report her rape, she recoiled; she seemed to be covering for someone. Now, the big question was the gestational age, since based on the dates she provided, she was too far along. So, she started out by asking for an abortion, eventually switched her story and ended up saying she didn't want one* (team member, psychologist).

Such outcomes also crop up when prosecution of the statutory rapist is a distinct possibility. Under Chilean criminal law, the pregnancy of a minor under 14 is always the result of statutory rape.[6] Public hospitals and private clinics alike are required to report these cases to police or prosecutors and notify the National Children's Service (Health Code, art. 119(2)). Yet, underage victims will often deny lack of consent in order to avoid a criminal investigation and shield culprits -usually their boyfriends- from prosecution. However, as the law states, as long as a victim meets the requirements, she has a right to terminate her pregnancy and consent or lack thereof is irrelevant. But some midwives do not question the specific context of the relationship or the boyfriend's age –to them, just being in a relationship and having started sexual activity at an early age suffices to rule out a victim's meeting the requirements of the law:

> *We've seen pregnant girls whose grandmothers will tell you that they were sexually assaulted. As a midwife, if the girl is 12-13 years of age, if I see a pregnant girl of that age, I just have to report. But when the police arrive, since the girls realize the stakes, they will obviously protect their boyfriends. Then you meet the boyfriend and it becomes clear that the girl was never assaulted and that the grandmother passed it off as such because she wanted her granddaughter to have an abortion* (midwife).

Other midwives understand full well that, a consensual relationship notwithstanding, being under 14 and pregnant constitutes statutory rape:

> *We take the girl's medical history, we ask if she is in a relationship, whether she used protection, if she's been abused or assaulted. We investigate to determine whether rape has occurred. But even if the sex was consensual, under 14 it's still rape* (midwife).

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[6] Under Criminal Code art. 362, vaginal, anal or oral intercourse with a minor under 14 constitutes rape. The specific intent is to safeguard the sexual autonomy and integrity of minor children deemed physically and emotionally unprepared to engage in sexual activity; guilt is determined solely on the basis of victim age and whether this fact was known to the assailant. It is not concerned with loss of consciousness, ability to fight back or abuse of a victim's mental impairment or illness (these circumstances are addressed in art. 361 of the Criminal Code on rape of individuals 14 and up).

Intrafamilial sexual violence

The interviews also exposed the sexual violence being perpetrated by fathers, close relatives, and partners. In general, victims were reluctant to acknowledge the events or delve deeper into them. Respondents note that threats, shame, and fear of stigma or blaming help explain their reticence and need for secrecy:

> *Most sexual abuse is committed by relatives or someone close, and keeping these events a family secret is established practice. Most such attacks […] generally by uncles, brothers, fathers or grandfathers, go unreported. They're suppressed through fear and threats* (team member, social worker). *We've seen […] teens whose pregnancies we suspected as being the result of sex with a father, uncle, older cousin, etc. This sets in motion a protocol that begins with a home visit. Most girls are not forthcoming and will just say that the baby's father has gone away and that's it. If you get them a psychologist's appointment, they'll just clam up and refuse to discuss it* (midwife). *This is very much like what we had when domestic violence programs were first getting underway. At first they didn't have much of an impact because of shame and fear, but nowadays they're much more consolidated. I hope that voluntary pregnancy termination programs are also heading that way* (team member, social worker).

Several respondents also noted that some medical practitioners do not regard forced sex with an intimate partner or close relative as sexual violence, and thus do not consider associated pregnancies to be the result of rape.

> *It's not like the girls are just coming in and saying "Hey, you know what, I need to terminate this pregnancy because it's the result of domestic sexual violence". Since most of the time [health teams] will question everything […] victims in such cases would tend not to be believed* (midwife). *Many cases of rape and non-consensual sex in the home go unreported. If every such case were taken seriously and we really tried to believe women rather than scrutinize their claims […] If we just went with what they need, many more of these cases would be reported […] But the people in charge will sometimes split hairs in order not to give the go-ahead […] In a perfect world, you should have someone listen to you and take you to a room where you can be safe… But in the real world, you are harshly judged* (midwife). *Although her boyfriend would beat and abuse her, this mother of four was glad she was pregnant again. She was in the early stages but she wasn't going to do anything about it because it was his baby. Of course we see cases like that, cases of violence not just from boyfriends but also from the pregnant woman's father. Although in the high-risk part of town where I work we see many such cases, this does not correlate with qualifying under the VTP Act or seeking an abortion* (midwife).

Shame and fear of not being believed will often lead to keeping rape-related pregnancies under wraps until after the 12-week time limit, when termination is no longer an option. *"This girl came in at 18 weeks […] saying 'I was abused by my boyfriend'. But it was too late to do anything"* (midwife). To steer clear of being disbelieved or of the consequences of potential criminal proceedings, some women will conceal the lack of consent:

> *A couple of months ago I referred this sexual violence case to a shelter. She went back to the guy two days later, even though she was pregnant and he was beating her black and blue. When I saw her next, she was visibly bruised. Women like that will deny everything and claim the sex was consensual: "I wanted to get pregnant. We're happy"* (midwife). *Family Health Centers know that many domestic sexual violence cases go unreported [….] because women won't talk and it's hard to make them talk. If we were able to get at every actual case of violence the numbers would be much higher, but a lot of evidence on domestic violence gets missed […] Also, women need to voluntarily report but it's hard for them to say "I need help"* (team member, psychologist).

A midwife believed that domestic sexual violence actually worsened during the COVID-19 pandemic and that many women delayed seeking help over health concerns:

> *As domestic violence went up during pandemic lockdowns, rape and abuse within dysfunctional families probably increased as well. It can well be that girls who were raped by relatives did not seek help because they could not leave the house for months, so when many who became pregnant during this time finally walked into a clinic, there wasn't much left to do. Human behavior can be unpredictable, but my impression is that this is what must have happened. Afraid of exposure to a new virus, women seem to have shied away from seeking help. Whatever the case, the fact is that pregnancies did rise considerably* (midwife).

Another midwife felt that inadequate screening for domestic sexual violence remains widespread in primary care, fueled by insufficient practitioner training and ineffectual victim counseling and support protocols:

> *Hospital staff aren't exactly caring. It's not as if they're going to sit down with a patient and say "Ok, sweetie, tell me what happened. Does your partner force you to have sex?" There isn't much in the way of social or psychological support and some [health staff] won't investigate at all* (midwife).

That said, other primary health care providers will still try to prevent revictimization by choosing not to refer women to outside health centers or providers:

> *We have this long-time patient who, as we later discovered, was being sexually abused by her brother. She had already interrupted a pregnancy that was the result of a sexual attack by him. During intake she admitted that she already had a daughter by her brother. We chose not to refer her to legally-mandated counseling, because our experience with such patients is that they end up being shuttled back and forth from one psychologist to the next, having to recount their stories over and over again, which we feel amounts to excessive intervention […] Patients like that should stay with one psychologist instead of being referred and counter-referred all over the place. That's not healthy* (team member, social worker).

Discussion

Our investigation showed that treatment to rape survivors is often conditioned and mediated by discursive practices that give rise to the "ideal victim" stereotype, and in some cases, withhold "victim status" and hinder or prevent access to voluntary pregnancy termination. We also found that young women victim of sexual violence whose lifestyle or sexual conduct do not conform to gendered expectations of femaleness are judged or even dismissed as victims of rape. As Fohring (2018) notes:

> This is exemplified by the young woman […] out drinking with friends, and therefore engaged in a not-so-respectable activity, who is assaulted by a partner or acquaintance —an offender who is neither big or bad, nor unknown to the victim. Contemporary discourse would also likely discuss the victim's level of intoxication, apparel, sexual history […] and failure to fight back as additional reasons to incite blame or withhold victim status (p. 196).

As our interviews showed, suggestive attire, partying at night, using drugs or alcohol and teenage or premarital sex may lead to young women being considered "bad victims" (Tomasini and Morales, 2016). A bad reputation creates identities that depart from the ideals of femaleness and notions of demure young women under parental control. They may also undermine the credibility of sexual violence reports and reduce the chances of health teams finding the woman's accounts plausible. Moreover, the stereotypes that set the normative conditions for victimhood may also extend to offenders: "The more ideal the offender, the more ideal the victim" (Christie, 2014, p. 283). An ideal offender is a burly, evil, unknown assailant who attacks a weak, respectable, innocent victim. Yet, in real life, most offenders are relatives, spouses, partners, friends, or acquaintances. Moreover, as several respondents noted, some practitioners will dismiss sexual violence and assume that all pregnancies occurring within a relationship are wanted. And especially if a young woman's partner does not fit the description of the ideal offender, they will tend not to inquire much about sexual violence or consent in connection with pregnancies.

The gender stereotypes that result in the "ideal victim" also play a role in withholding victim status from adult women who undergo sexual violence in domestic or intimate relationship contexts. The Chilean Ministry of the Interior's IV Survey on Domestic and Other Violence Against Women (Undersecretariat for Crime Prevention, 2020) shows that sexual violence in the home rose from 1.8 percent in 2012 to 2.8 percent in 2020. Some 2.2 percent of respondents reported being forced to have sex; 1.7 percent were physically forced to engage in sex; 1.1 percent were threatened by partners with withholding funds for household expenses unless they agreed to sex; 1 percent were forced to use no protection, and 0.8 percent were forced to give up contraception. Article 369 of the Chilean Criminal Code makes spousal rape a crime under the law, but as Christie notes, married women are sometimes not considered "ideal victims": "When the man beat up his wife in my culture, and the police are called in, they called it, until recently, a case of '*husbråk*.' That means noise in the house. Noise does not create good victims. Noise is something that needs to be muted. […] Wives are not 'ideal victims.' Not yet." (2014, p. 278). Gender stereotypes also help create the symbolic mandate of the wife or lover who must be always willing and available. This notion, which remains strongly held in contemporary society, harks back to some extent to sexual activity being regarded as a marital duty. Article 102 of the Chilean Civil Code defines marriage as "…a solemn contract whereby a man and a woman join together in true and indissoluble wedlock, for as long as they live, for the purpose of living together, *procreating*, and assisting each other" (emphasis added), although article 33 of the new Civil Marriage Act does provide for suspension of the duties of cohabitation and fidelity after a legal separation. But if love and sex are the fundamental duties of marriage, it is argued, there can be no such thing as marital rape since lack of consent cannot be invoked in legally defining the act. As Randall points out:

> Dominant legal images of ideal victims reveal myriad ways in which some women are almost automatically disqualified from the category of credible sexual assault victims […] the idea that men's right to ongoing sexual access to their wives such that their female intimates' consent to sex is, by definition, continuous, renders marital rape, by definition impossible (Randall, 2010, p. 409).

Randall further notes that stereotypes that presume the consent of sex workers also exclude them from victim status: "Women in the category of 'wives' and women in the category of 'prostitutes' -typically seen to be at opposites poles of so-called 'respectability'- are often both assumed to be continuously consenting to sex. As a result of this assumed continuous consent, their claims to sexual assault are usually legally nullified (Miller and Schwartz, 1995)." In Chile, this very notion is contemplated in the last paragraph of Criminal Code article 369, which allows for partner or marital rape charges to be dropped at the victim's request, unless a judge disagrees. This shows that women who endure sexual violence at the hands of their partners but do not fit the "ideal victim" mold may be refused the social and legal recognition normally accorded to victims. Moreover, as reported by survey respondents, some health care providers will not even acknowledge such attacks as rape (Stewart et al., 1996, p. 168). If practitioners do not see rape-related pregnancies as the result of a wider context of intimate partner violence, where consensual sex cannot easily be told apart from acts that wholly or partially lack consent, the standard of credibility required to establish the crime of rape will hardly be met at all.

Furthermore, while some women may lack the characteristics needed to be subsumed into the normative "ideal victim" model, others who are socially conditioned by forms of domination and exclusion that intersect gender, race, sex and class (Crenshaw, 1989) may not be acknowledged as victims at all. In Chile, Afro-descendant women –Haitian, Dominican, Venezuelan or Colombian migrants– constitute such an example of social and normative dismissal. Neither ideal nor real victims, these non-victims of sexual violence stand at the crossroads of gender, race, ethnicity, marginality and non-citizenship. As Long (2021) notes, "Some Black women (particularly those with an offending history), are not only non-ideal victims; their racialized construction as the 'suspect' is incongruous with the ideal victim and they are constructed as the 'ideal offender' (p. 14). Not only are they not ideal victims, they are not victims at all: they become the (un)victim." While Afro-descendant migrants are often more vulnerable to sexual violence from their partners, those trying to enter the country illegally are additionally vulnerable to demands for sex from smugglers and to human trafficking for sexual exploitation purposes, both consensual and not (Aguilera et al., 2018).

In fact, if dominant discourses on gender, class, sexuality and race can succeed in producing and naturalizing certain cultural imaginaries that pass for a reality that is expressed in the status of "ideal victim," it is because social norms, and the law in particular, will mask and even facilitate the work of stereotypes on maleness and femaleness. The notion of ideal victim resonates clearly in Smart's "the gender of law" formulation. To traditional legal discourse holding the law as being wholly neutral in terms of the gender and sex of victims and offenders, Smart replies that stating that "the law is gendered" does not only mean that the law is sexist or male-oriented, but that it operates through discursive practices that regulate and distribute the norms of recognition on the basis of sexual difference. In fact, the law operates as the technology that produces a generic subjectivity based on certain false social and sexual stereotypes (Smart, 2000, p. 43). This logic helps understand why some non-ideal or non-victims are not only refused legal recognition, they are also blamed and even held responsible, as if they were the offenders. Not only are women denied survivor of sexual violence status over not conforming to the female ideal; the discourse on sexual difference being an existential, ontological and constituent condition of female subjectivity is reinforced. As Smart adds, "[I]n legal discourse the prostitute is constructed as the bad woman, but at the same time she epitomizes Woman in contradistinction to Man because she is what any woman could be and because she represents a deviousness and licentiousness arising from her (supposedly naturally given) bodily form, while the man remains innocuous." (2000, pp. 43–44).

Survey respondents also noted that adult women tend not to report sexual violence. Their reasons include daunting degrees of red tape as well as fear of judgment, retaliation, or upsetting family relationships (Picasso, 2018). While Chilean law does not require a prosecutor or police report for the crime of rape to established, our interviews showed that some medical practitioners will use such a requirement as a proxy for credibility –the rationale being that a woman who is prepared to recount her story across multiple venues and institutions must be telling the truth. This practice, however, leads to re-victimization and constitutes a violation of women's rights. Ministry guidelines stress that looking into the facts and ruling on the veracity of victim accounts is the job of courts and prosecutors; health care practitioners have no authority to do so (Government of Chile, Undersecretariat of Public Health, 2018, p. 82). Yet, the guidelines do not spell out the parameters for assessment or the scope of plausibility tests. The resulting leeway in establishing the crime of rape makes for a normative vacuum that is, however, legal and has the effect of introducing a degree of discretion into enforcement of the VTP Act.

Some studies have shown that adult women will not report sexual assault in order to avert the 'victim' label. Making reference to the 1992–2000 U.S. National Crime Victimization Survey, Weiss (2011) observes that "The perception of victims' innocence and credibility may also impact the discretionary labels and punishments determined by criminal justice professionals" […] "Offenses may be seen as less serious and offenders less guilty when victims themselves are considered to have behaved in some manner that makes them less innocent in the eyes of the law (e.g., engaging in mutual combat or illegal activity, behaving recklessly." (p. 451). This translates into 9 percent of victims of sexual violence choosing not to report to prevent being stereotyped as weak or fragile (p. 458). To address related stigma and blaming, some victimologists (Link and Phelan, 2001, p. 378) have proposed rethinking the category itself. Noting the philological, historical and philosophical definition of victim status (the term comes from the Latin *víctima*, meaning "destined for sacrifice"), Van Dijk remarks that "victim" is a semantically charged term that replicates and reinforces ideal victim stereotypes (Van Dijk, 2009, pp. 1–2). As Stanko also argues, "Creating a category 'victim' is one way of dealing with women's experience of male violence. The role and status of 'victim' is separate from that of all women. 'Victimism', the practice of objectifying women's experiences of male violence, serves to deny the commonality among sexually and/or physically assaulted women and their oneness with all women" (Stanko, 2014, p. 16). Victimologists and feminist movements alike would rather speak of 'survivors' (Clay-Warner and Edgemon, 2020), a term that de-emphasizes gendered expectations of the ideal victim –weakness, respectability, innocence– and stresses self-reliance, resilience, and strength. As Dunn puts it: "Calling battered woman 'survivors', while granting them agency, may only shift responsibility and attention back to them as individuals and away from the social structures and forces that they must overcome." (Dunn, 2005, p. 23).

These findings shine a light on the gender stereotypes and biases permeating the habits, conduct, and thinking of Chilean primary health care practitioners in reference to women who become pregnant as a result of sexual violence. Their notions about the "ideal victim" hinder access to the rights, goods and services contemplated in the voluntary pregnancy termination law, to the detriment of real victims and of those women who may not be considered victims at all. Although the VTP Act decriminalized abortion in cases of rape, enforcement still revolves around culturally-based discourses and structures that must be dismantled if socially-shared, gendered notions of sexual violence are to be truly transformed. Governments that fail to take concrete steps to do away with such stereotypes and guarantee women's rights only help sustain and further institutionalize discrimination.

Imposing on the health care system to report the rape when a woman request an abortion under the rape ground impinges upon woman's right to privacy since not all women may want to make known the assault, the woman's safety might be at stake if the agressor could retaliate especially if he is part of the family circle or related to her, and she is deprived of the right to autonomy on the decision to proceed with criminal charges. This requirement demands a normative change.

Health care practitioners must therefore be able to accurately identify women who have undergone sexual violence and offer pregnancy termination services as part of a process of psychosocial support that does not discriminate against or stigmatize their choices. This requires clear actions from central government and primary healthcare administrators to provide training on the law and its protocols, on gender violence and stereotypes. Practitioners should receive robust instruction and training designed to both increase their awareness of sexual violence and eradicate the obsolete gender roles and cultural ideals that operate as the normative model of femaleness. Sensitizing health professionals on sexual violence, and instructing on sexual and reproductive rights are necessary tools and minimum political and ethical obligations for the health system to change practices that violate women's rights.

The government, for its part, should guarantee access to all services under the law that decriminalized pregnancy termination on three grounds so as to assure all women effective, timely, quality biomedical and psychosocial care.

This study is limited in scope as it was carried out in the Metropolitan Region of Santiago and did not include women nor girls to avoid victimization. Future studies should assess the situation in other regions of the country given their particularities: geography and sociocultural contexts revealing higher rates of violence against women and girls, and greater opposition of health care providers to legal abortion under the rape ground.

Data availability statement

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

Ethics statement

The studies involving human participants were reviewed and approved by Comité de Ética en Investigación de la Facultad de Derecho, Universidad Diego Portales. The patients/participants provided their written informed consent to participate in this study.

Author contributions

LC, AM, LV, NB, and JB participated in the coding process. JÁ and LC drafted the article. LC, LV, and AM designed the research. NB, LC, and LV conducted the interviews. All authors contributed to the article and approved the submitted version.

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Conflict of interest

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The abortion divide: Exploring the role of exclusion, loss of significance and identity in the radicalization process

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Introduction: Recently, the abortion issue has entered the spotlight in the USA, leading to potential radical actions. As the majority opinion on the abortion issue vary with state, some individuals will be in the numerical minority within their state, possibly evoking feelings of exclusion. Social exclusion can motivate a radicalization process. The aim of this paper is to explore how individuals in a numerical minority experience feelings of exclusion and significance loss and how this may drive radicalization in the context of the abortion issue.

Methods: A quasi-experimental design was used and 534 respondents from naturally occurring numerical minority and majority groups based on state abortion opinion participated in an online survey.

Results: Results showed that those in the numerical minority experienced exclusion and were more willing to engage in and endorse radical actions compared to those in the majority, regardless of position on the abortion issue. Serial mediation analysis revealed that the pathway between minority group status and engagement and endorsement of extreme actions was fully mediated by need-threat and ingroup identity.

Discussion: Being in the numerical minority is associated with feelings of social exclusion, which may trigger a radicalization process. The results advance our understanding of when and who is vulnerable to radicalization and that social structures that perpetuate marginalization and inequality may contribute to radicalization. Results highlight the need to continue to explore radicalization from a group-based perspective and emphasize exploring mediating factors as a pathway from social experiences to willingness to engage with radical groups.

KEYWORDS

abortion rights, radicalization, social exclusion, significance loss, ingroup identity

Introduction

The purpose of this article is to explore how minority group status and associated feelings of exclusion may drive radicalization in the context of the abortion issue. In recent decades, following several high-profile terror attacks there has been an increased focus on understanding the radicalization process (Kruglanski and Fishman, 2009; King and Taylor, 2011). Prominent radicalization models argue that the radicalization process may function similarly across a variety of social, political, and religious issues (McCauley and Moskalenko, 2008; Doosje et al., 2016). The controversial topic of abortion rights in the USA is highly fraught with emotion and although much activism occurs within the boundaries of the law, it is a topic that is also associated with extremism, violence, and terrorism (Turell et al., 1990; Masucci, 2022). Within the past two decades, abortion providers have been murdered, abortion clinics bombed, death threats made to those seeking abortion services and intimidation tactics used (see Masucci, 2022 for overview). Recent changes in legislation have put the abortion debate into the spotlight and the increased focus has resulted in concerns that extremism and violent acts may increase from both sides of the abortion issue (Fox, 2022).

Radicalization and social exclusion

Many radicalization models highlight social factors that may drive individuals to shift from socially accepted activism to more radical actions (McCauley and Moskalenko, 2008; Kruglanski et al., 2009, 2014; Kruglanski and Fishman, 2009; Doosje et al., 2016; Kruglanski et al., 2019, 2022). One such factor that has gained momentum in recent years is that of social exclusion and there is an increasing amount of empirical evidence that demonstrates the causal role that exclusion may have as a driver in the radicalization process (Knapton et al., 2015, 2022; Pfundmair, 2019; Renström et al., 2020; Pfundmair and Mahr, 2022). Being socially excluded leads to a loss of significance, which elicits a quest for significance and ways to restore it. The quest for significance radicalization model argues that this core motivation to maintain significance is a driver in the radicalization process (Kruglanski et al., 2009, 2014; Kruglanski and Fishman, 2009; Kruglanski et al., 2019). Belonging to a group can restore significance and recent research show that loss of significance increases subsequent extreme group identification (Bäck et al., 2018a; Renström et al., 2020). Recent studies also show that the link between significance loss and radicalization is mediated by identification with the ingroup (Knapton et al., 2022; Milla et al., 2022).

Much of the empirical research exploring the effects of exclusion has examined interpersonal exclusion (exclusion perceived due to a personal failing). However, recent research stress the importance of exploring exclusion from a group-level perspective (exclusion due to group membership), and this is particularly pertinent considering much of the radicalization literature deem radicalization a societal, group-based issue (McCauley and Moskalenko, 2008; Doosje et al., 2016; Knapton et al., 2022). Consequently, this paper aims to bring together traditional exclusion models and explore them at a societal level within a radicalization framework to provide an explanatory pathway of how minority group status, feelings of exclusion and threatened fundamental needs may drive individuals to identify with a radical ingroup and in turn be willing to participate in and endorse radical actions.

Radicalization is defined as the process in which an individual adopts extreme ideologies and beliefs, which may or may not result in extreme behavior (McCauley and Moskalenko, 2008). Recent models of radicalization are dynamic, exploring several pathways to extremism and the multifaceted factors that may drive individuals to engage (Borum, 2004; Horgan, 2008). Although many models have been proposed, and each has its unique contribution to the field, most models center around similar ideas trying to provide an explanation of how "ordinary" individuals may shift from normative behaviors to non-normative behaviors (McCauley and Moskalenko, 2008). This shift has been labeled the "conveyor belt." This metaphor can be used to explain how individuals may slowly shift from normative activism to non-normative radical actions or even violence and exploring the early stages of this shift may be important in understanding how individuals escalate up the radicalization process (Moskalenko and McCauley, 2009). Thus, although radicalization is the process in which an individual may participate in violent actions, it is nuanced in level of severity and radicalization includes all non-normative action (any action that breaks social rules). Scholars consider non-normative and radical actions synonymous (Becker and Tausch, 2015). Consequently, these models all highlight the need to explore a normative population and how this population may be vulnerable to early radicalization rather than focusing to those already radicalized and at the violent end stage of the process (McCauley and Moskalenko, 2008).

The multifaceted pathway models give space not for one explanatory factor for radicalization but a dynamic interplay of several factors (McCauley and Moskalenko, 2017; Jensen et al., 2020). Nevertheless, it is possible to explore how individual factors may make individuals susceptible to radicalization pathways and one such theory is the quest for significance model. Kruglanski and Fishman (2009), Kruglanski et al. (2009, 2014)), Kruglanski et al. (2019) and Kruglanski et al. (2022) developed this motivational model of radicalization and it is a theory that is based on the idea that individuals have a need for recognition and positive self-esteem (Baumeister and Leary, 1995). However, certain events can happen in life that challenge this self-view, such as personal or societal grievances. When such events occur, it results of feelings of meaninglessness or humiliation and in turn results in significance loss. This loss of significance motivates radicalization, such that when an individual experiences significance loss they are motivated to regain significance and compensate for the loss. These compensatory activities will likely be conducted *via* their available social outlets, however if this fails, they may be drawn to extreme groups to fortify the basic need of significance. Adopting an extreme ideology and participating in extreme activities is one way to restore significance as these radical beliefs provide an individual with feelings of importance, meaningfulness, and control (Kruglanski et al., 2009, 2014; Kruglanski and Fishman, 2009; Kruglanski et al., 2019, 2022). Empirical research appears to support the quest for significance theory, with loss of social significance being a strong predictor of ideological crimes and evidence that it increases adherence to extremist ideas and participation in violent extremism (Webber et al., 2018; Jasko et al., 2020; Schumpe et al., 2020).

Significance can be lost in a variety of ways, but one way is *via* social exclusion (Kruglanski et al., 2019; Renström et al., 2020). Social exclusion is related to a host of negative outcomes. For instance, reduced mood and social pain, and in long-term cases, reduced life expectancy are some of the negative outcomes (Williams, 2007; Eisenberger, 2012; Rico-Uribe et al., 2018). The temporal need-threat model of ostracism explores the damage that occur from such an event on the individual's fundamental needs (Williams, 2009). Specifically, this model argues that when an individual is excluded it depletes their fundamental needs such that individuals have a reduction in self-reported feelings of belonging, self-esteem, feelings of control and meaningful existence. The model argues that in response to exclusion, individuals will try to fortify these needs. For example, research show that individuals try to fortify these needs by regaining belonging *via* opportunities of inclusion. For instance, exclusion leads to increased attention to smiling faces in a crowd and compliance to a group and extra efforts in collaborative group tasks (Williams and Sommer, 1997; Carter-Sowell et al., 2008; Dewall et al., 2009). Given the desire to restore social needs and social connections following an episode of exclusion, it is not surprising that excluded individuals are more likely to be receptive to joining political groups (Bäck et al., 2015, 2018a, 2021; Knapton et al., 2015; Renström et al., 2021) and are more likely to participate in actions that conforms with the norm of the group (Dijker and Koomen, 2007; Bäck et al., 2013, 2018b).

In the radicalization literature, research also shows that marginalization and social exclusion seem to function to evoke a quest for significance. For instance, marginalized minority community members who feel a loss of significance are more likely to report increased support of fundamentalist groups, and recent experimental studies have linked social exclusion as a source of significance loss as a causal factor in individuals joining radical groups (Lyons-Padilla et al., 2015; Renström et al., 2020; Milla et al., 2022). Although there is a strong overlap in the need-fortification hypothesis and the quest for significance such that both are based on the need to restore fundamental human needs (Williams, 2007, 2009; Kruglanski et al., 2014; Knapton et al., 2015), there is very limited research exploring them in relation to one another (Renström et al., 2020). Consequently, it is essential to explore need-fortification within a radicalization framework.

Group identification

When an individual is socially excluded from a group, they do not only lose a sense of belonging, but the identity associated with that group is threatened too. The rejection-identification model (Branscombe et al., 1999) details how discrimination and feelings of exclusion may result in individuals identifying more with their minority ingroup to protect against the negative outcomes of social exclusion. Research support this, with minority group members who experienced prejudice having increased minority ingroup identification (Verkuyten and Yildiz, 2007; Armenta and Hunt, 2009; Barlow et al., 2012; Cronin et al., 2012; Wiley et al., 2013). Identity is a key component when considering radicalization. Research indicates that ingroup identity to an extreme group is an important factor in determining how much an individual will endorse or engage in extreme actions (Hogg et al., 2010; Hogg and Blaylock, 2011; Hogg, 2014; Aghabi et al., 2017; Strindberg, 2020; Wagoner et al., 2021; Milla et al., 2022). Moreover, to restore status following significance loss, individuals may identify with an extreme group (Milla et al., 2022). Given the shifts in identity following an episode of exclusion, the pathway between an episode of exclusion, associated with significance loss, and radical actions will be mediated ingroup identification. Recent research support such a link with an experimental study revealing that those excluded due to their opinion on Brexit, showed increased identification with the EU and in turn increased willingness to join and participate in both normative and radical actions with a Pro-EU group (Knapton et al., 2022). Although there is extensive research exploring the phenomenon of social exclusion, most of the research has considered the exclusion or rejection of single individuals from a group, or at best, the exclusion of one small group by another. However, exclusion occurs at a societal level as well, with minority groups feeling excluded and marginalized within their society. Little research has explored what constitutes minority/majority groups in the exclusion context. Often, research exploring exclusion in minority/majority groups examines groups with a history of intergroup status and power differences (Branscombe et al., 1999; Barlow et al., 2012; Oxman-Martinez et al., 2012; Wiley et al., 2013). Thus, examining how majority/minority status based on political or social issue support may impact feelings of inclusion/exclusion, is necessary too. Specifically, it is important to understand if simply a difference in numerical status for a social/political cause in one's social group is enough to trigger feelings of exclusion, or whether there needs to be a historical context of group power differences and inequality that are traditionally associated with studies exploring feelings of discrimination and exclusion. Hence, in this paper, minority/majority status is simply the numerical representation of opinions, and the extent to which this numerical status influences identification is an empirical question we explore. Given that recent research show that numerical representation of ones' group within a context is enough to trigger feelings surrounding a sense of belonging (Glasford, 2021), we investigate if being in the numeric minority will trigger feelings of exclusion. We utilize the abortion issue in the US to explore if numerical minority is associated with feelings of exclusion and ultimately radicalization.

The abortion issue

The abortion debate in the US has long been a controversial topic, with few social issues sparking more emotion than the discussion surrounding women's reproductive rights (Turell et al., 1990). Although the abortion debate is a provocative topic in general, this highly sensitive issue was brought to the forefront of discussion when Texas introduced the "heartbeat bill" in August 2021, making abortion past the 6-week mark practically illegal, and reigniting the abortion debate in the US. The increased focus on the abortion debate is likely to increase salience of one's stance on the issue and in turn as shown by previous studies, increase focus on one's identification to one side of the issue (Hernández et al., 2021). With people's opinions on a topic being more salient due to the issue being discussed, it is individuals may become acutely aware of the numerical majority opinion within their surroundings. Further, given that numerical representation of a group within a space can impact feelings of belonging (Glasford, 2021), it is likely that perceptions of numerical majority opinion surrounding an individual will impact feelings of exclusion or inclusion. Hence, individuals who are in the numerical minority due to their opinion on abortion may experience feelings of exclusion and be more willing to radically engage on behalf of an abortion activist group. Such feelings of exclusion should be associated with threatened fundamental needs of belonging, self-esteem, control, and meaningful existence (Williams, 2009; Glasford, 2021). Therefore, our first hypothesis is:

> *H1*: Participants who are in the minority will have more threatened fundamental needs than participants in the majority.

Given that those in the numerical minority experience feelings of exclusion and that excluded individuals whose fundamental needs are threatened seek out ways to restore and fortify them and *via* increased willingness to join political groups (Williams, 2009; Knapton et al., 2015), our second hypothesis is:

> *H2*: Participants in the minority will show increased willingness to participate in and endorse radical actions on behalf of a [Pro-life/Pro-choice] abortion activist group, than those in the majority.

Finally, identity is an important predictor in radical actions (Hogg et al., 2010; Hogg and Blaylock, 2011; Hogg, 2014; Aghabi et al., 2017; Strindberg, 2020; Wagoner et al., 2021; Milla et al., 2022). Given that increased ingroup identity may be used to buffer and fortify threatened needs following exclusion, those in the minority who experience threatened needs may identify more strongly with an activist group and in turn show increased willingness to participate in and endorse radical actions on behalf of an activist group (see conceptual model in Figure 1). Thus, our final hypothesis is:

> *H3*: The effect of minority group status on willingness to participate and endorse radicalism is mediated by increased threatened needs and in turn increased identification with the ingroup.

Methods and data

Research design

In this study we used a quasi-experimental design where naturally occurring groups were examined. We recruited Pro-life and Pro-choice participants from Pro-life and Pro-choice states. When a participant's opinion on abortion matched the majority opinion of the state they lived in (e.g., Pro-life supporter living in a Pro-life state) they were in the majority and conversely when the participant's opinion differed from the majority opinion of the state (e.g., Pro-choice supporter living in Pro-life state) they lived in they were in the minority. As a result, we ended up with 2 groups that formed the independent variable numerical status (minority/majority). The dependent variables analyzed in this paper are *Willingness to participate in radical actions* and *endorsement of radical actions*. There were two mediator variables; *activist group identity,* and *Need-threats.* The study was set up on *Qualtrics.*

Participants

A sample of 543 participants was recruited from the online study platform *Prolific Academic*. *Prolific Academic* is an online recruitment website with the purpose of advertising open research studies to participants. To be eligible, participants had to be American citizens currently live in the USA. Pro-life and Pro-choice participants were recruited from both Pro-life and Pro-choice states using the prescreening criteria available on *Prolific Academic*. Participants responded to the prescreening criteria when joining the website and self-identified as either Pro-choice, Pro-life or Do not want to answer. Using data from a public opinion survey, the participants were selected from the top 6 most Pro-life states and Pro-choice states (Diamant and Sandstrom, 2020). Pro-life states were Arkansas, Mississippi, Alabama, West Virginia, Louisiana and Kentucky. The Pro-choice states were Massachusetts, Vermont, Connecticut, New Hampshire, Rhode Island and New York.

Participants were naturally based in one of the two conditions: majority or minority. In the *majority* condition, there was 281 participants (mean age of 37.29, SD = 13.81) of which 129 were men, 142 women and 3 other. In the *minority* condition there was 260 participants (mean age of 36.90, SD = 13.82) of which 128 were men, 132 women and 2 other. Participants were rewarded £2.10 for their participation.

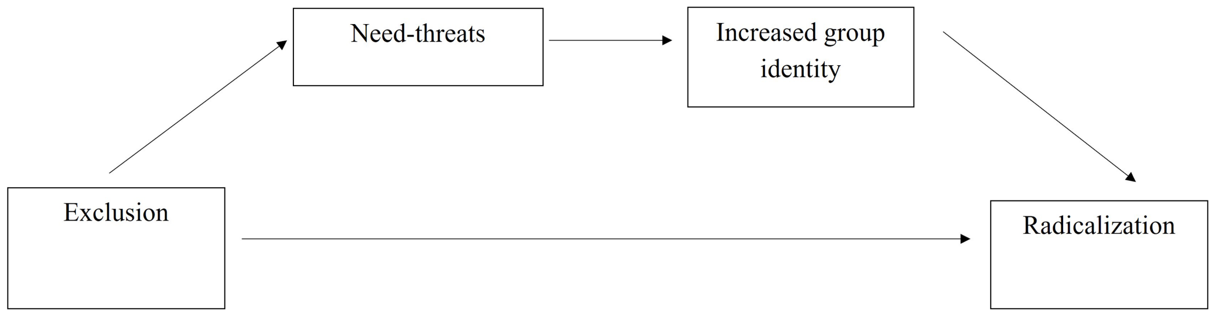


FIGURE 1
A conceptual model of the mediating pathway of need-threats and activist group identity between the effect of exclusion on willingness to participate and endorse radicalism.

Procedure and measures

On starting the survey participants were told this was an online survey exploring their thoughts and feelings on abortion, reproductive rights, and abortion legislation. Further, they were told that the final section of the questionnaire would contain questions from a third-party group. This group was fictional. After reading the survey information in which the participant was informed of their right to withdraw and that their data would be completely confidential, they provided consent to participate.

Following the information, the participants were asked several questions about their thoughts and feelings regarding abortion and about the perception of abortion opinions in their state. Participants were prompted with the phrase "Given that a **majority** in your state are [Pro-life/Pro-choice] please describe how this makes you feel" and this was adjusted depending on whether the participant lived in a state that was majority Pro-life or Pro-choice. Participants were then presented with an adapted form of the need-threat scale formed of 20 items (Williams, 2009). Examples of these items are shown in Appendix A. Participants responded on a 5-point scale with 1 indicating *not at all* and 5 indicating *extremely.* The 20 items were combined and averaged to give a total need-threat score. The Cronbach's alpha was good, $\alpha = 0.66$.

In the next section, participants were informed that the following section was a survey by a third-party group. This group was fictional but presented as real to the participants. Participants were told that the answers to the survey prior and the answers to the third-party group would be examined separately and we apologized for any overlap in questions. This statement aimed to make the third-party group survey more believable. Once participants clicked "continue" they were presented with a brief description of the group. The group differed based on whether the participants identified as Pro-life or Pro-choice, with the group presented designed to be congruent with the participants' opinion on abortion. Hence, if the participant identified as Pro-life, they were presented with the group "Pro-life for America" and if they identified as Pro-choice, they were presented with the group "Pro-choice for America." The group descriptions were made as similar as possible in tone and phrasing, and differed only in content to match the abortion position (e.g., anti-abortion sentiments for the Pro-life group and freedom of choice in reproductive decisions in the Pro-choice group). At the end of the group descriptions, both groups explained that they were interested in recruiting new members and wanted to know what actions appealed to possible new members. After this statement, several identity and participation items followed. Participants were asked about their identification with the activist group, which consisted of 3 items: "I feel I could identify with [Pro-life/Pro-choice] for America"; "I feel I could connect with other members of [Pro-life/Pro-choice] for America" and "I identify with the aims of [Pro-life/Pro-choice] for America." Participants responded on a 7-point scale from 1 = *strongly disagree* to 7 = *strongly agree.* The items were combined and averaged to form an activist group identification index ($\alpha = 0.93$).

Following this, participants were asked about willingness to engage in radical action. They were asked how willing they would be to participate in the 3 following forms of non-normative collective action on behalf of the group: take part in an occupation, vandalize buildings, and protest on social media (e.g., post offensive material on opposing groups' social media). Participants responded on a 5-point scale from 1 = *not at all willing* to 5 = *very willing.* The 3 items were combined and a willingness to engage in radical action index formed ($\alpha = 0.66$).

Finally, participants were asked about endorsement of radical actions. This was formed of two items: "I think even extreme methods are justified and acceptable to reach the goal of a greater American society. That is, a combination of traditional methods like petitions, but also direct actions that may extend beyond the borders of the law" and "I think most [Pro-life/Pro-choice] supporters in society agree that extreme methods are justified and acceptable to reach the goal of a [Pro-life/Pro-choice] for America for a better American society." Participants indicated on a 7-poing Likert scale how much they agreed with the statement, with 1 indicating they *strongly disagreed* and 7 indicating they *strongly* *agreed*. The two items were combined, and an endorsement of radical actions index formed ($r = 0.66$).

This marked the end of the study and participants were debriefed, thanked for their time, and given the opportunity to provide any feedback/questions they had.

Results

Preliminary analyses

Because we wanted to explore natural inclusion/exclusion based on whether the participant's opinions matched or mismatched the majority of the state, we first analyzed if participants perceived the same state majority as our pre-set states (Diamant and Sandstrom, 2020). Participants rated the perceived percentage of Pro-life/Pro-choice supporters in their state. A *t*-test was conducted in which our classification of states being Pro-life or Pro-choice was entered as an independent variable and the participants' perception of percentage of Pro-life/Pro-choice supporters in their state was entered as a dependent variable. The t-tests revealed that participants significantly, $t(508) = -13.24$, $p < 0.001$, Cohen's $D = 1.18$, rated a higher percentage of Pro-life supporters ($M = 71.33$, $SD = 14.86$) living in Pro-life states, compared to Pro-choice supporters ($M = 49.71$, $SD = 21.12$), and a significantly, $t(508) = 16.89$, $p < 0.001$, Cohen's $D = 1.51$, higher percentage of Pro-choice supporters ($M = 57.90$, $SD = 20.75$) living in Pro-choice states compared to Pro-life supporters ($M = 29.97$, $SD = 16.00$). Thus, the analyses confirmed that participants' perceptions of the majority abortion stance of the state matched that of previous research and thus what we based on categorization of Pro-life/Pro-choice states on (Diamant and Sandstrom, 2020).

Main analyses

To test our hypotheses a series of t-tests were conducted. The descriptive statistics and correlations for all variables are presented in Table 1.

The first hypothesis stated that *participants who are in the minority will have more threatened social needs than participants in the majority.* The first t-test was conducted with minority/majority as the independent variable and the need threat index as dependent variable. There was a significant effect of minority/majority on the need threat scale, $t(521) = -2.82$, $p = 0.005$, Cohen's $D = 0.23$ such that those in the minority had significantly higher threatened fundamental needs ($M = 2.62$, $SD = 0.43$), than those who in the majority ($M = 2.51$, $SD = 0.44$). Thus, hypothesis 1 was supported—simply being in the numerical minority is associated with feelings of being excluded.

TABLE 1 Means, standard deviations, and correlations for all variables.

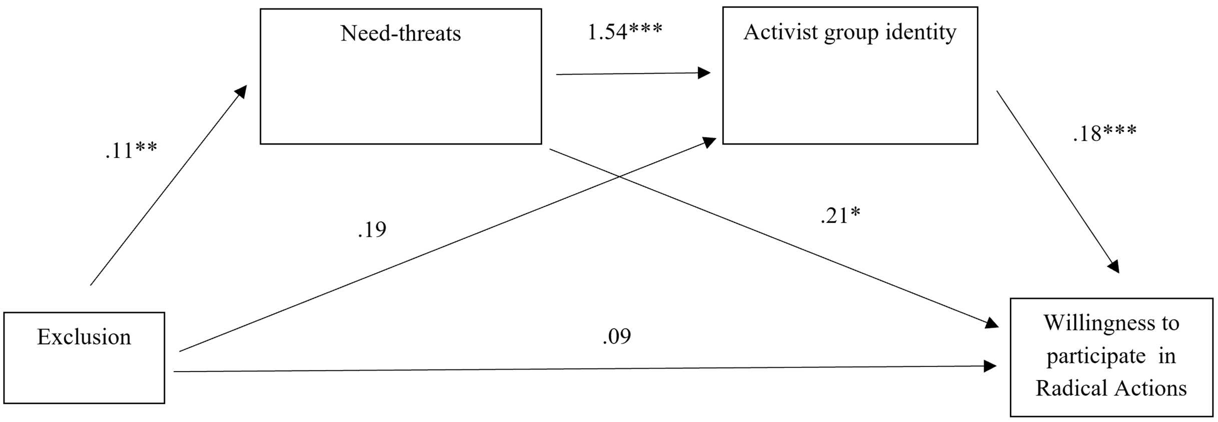
	Mean	SD	Need-threats	Activist identity	Radical Actions
Need-threats	2.57	0.44			
Activist group identity	5.86	2.47	0.28**		
Radical actions	2.10	0.91	0.24**	0.53**	
Endorsement of radical actions	2.83	1.66	0.17**	0.19**	0.46**

**$p < 0.01$, *$p < 0.05$.

The second hypothesis stated that *participants in the minority will show increased willingness to participate in and endorse radical actions than those in the majority*. As a result, two *t*-tests were conducted to explore the effect of minority/majority group status on willingness to participate in radical actions and endorsement of extreme actions. The results revealed a significant difference, $t(531) = -2.21$, $p = 0.027$, Cohen's $D = 0.19$, such that those in the minority ($M = 2.15$, $SD = 0.92$) were significantly more willing to participate in radical actions than those in the majority ($M = 1.97$, $SD = 0.90$). There was no significant effect of minority status on endorsement of radical actions. Consequently, hypothesis 2 was partially supported.

Mediation analysis

Hypothesis 3 stated that *the effect minority group status on willingness to participate and endorse radicalism is mediated by increased threatened needs and in turn increased identification with the ingroup.* A serial mediation analysis was conducted using Model 6 in the SPSS macro PROCESS (Hayes, 2013). Using bias corrected bootstrapping with 95% confidence intervals with 5,000 bootstrapping samples, the indirect effect of minority group status on willingness to participate in radical actions through both threatened fundamental needs and activist group identity was conducted. As a result, need-threat and activist group identity were added as mediators between the predictor variable (minority/majority) and the outcome variable, willingness to participate in radical actions. Effects were significant if the 95% confidence intervals associated with each analysis did not include 0. As can be seen in Figure 2, there were multiple significant pathways, but the sequential mediation analysis revealed a significant indirect pathway from minority group status *via* need threat and activist group identity to willingness to participate in radical actions was significant when all pathways were considered (see Table 2). Minority group members who had higher threatened needs showed higher activist group identity and were more willing to participate in radical actions with the activist group. This analysis was re-run using the dependent variable endorsement of radical actions and the results again revealed a significant indirect pathway from minority group membership to endorsement of extreme actions *via* need-threat and group identity (see Figure 3; Table 2). This finding mirrors that found for willingness to participate in radical actions. Consequently, hypothesis 3 was fully supported.



Note: (*** $p < .001$, ** $p < .01$, * $p < .05$)

FIGURE 2
Serial mediation model with coefficients for pathway between exclusion and willingness to participate in radical actions with mediators need-threats and activist group identity.

TABLE 2 **Direct and indirect effects of exclusion on willingness to participate in radical actions and endorsement of radicalism from bootstrapping with confidence intervals in parenthesis.**

	Radical actions	Endorsement of radical actions
Direct effects	0.08 (−0.05; 0.22)	−0.02 (−0.30; 0.26)
Indirect effects		
Exclusion – Need-threats– Radicalism	0.02 (0.00; 0.05)	(0.01; 0.11)
Exclusion – Group Identity–Radicalism	0.03 (−0.04; 0.11)	(−0.02;0.08)
Exclusion – Need-threats– Group Identity–Radicalism	0.03 (0.01; 0.06)	(0.01; 0.04)

Level of confidence for all confidence intervals is 95%. Results are based on 5,000 bootstrap samples.

Discussion

The focus of this article was to expand the understanding of the radicalization process by exploring the role of minority/majority group status, feelings of exclusion, and identity on willingness to participate in and endorse radical actions on behalf of an abortion activist group. We provide an empirical test of the significance loss hypothesis (Kruglanski et al., 2014, 2022) and illuminate how numerical status and representation (e.g., minority/majority group) could be a starting point in a radicalization process. The study was situated using the significance quest model of radicalization as a framework for explaining the motivational factors that drive an individual to be receptive to extremist groups (Kruglanski and Fishman, 2009; Kruglanski et al., 2009, 2014; Kruglanski et al., 2019). Significance loss can be triggered by social exclusion and we wanted to explore if feelings of exclusion could lead to radicalization (Kruglanski et al., 2014). Previous research has demonstrated that belongingness concerns occur among individuals who are in the numerical minority within a group, and we posited that being a minority group member would trigger feelings of exclusion and thus significance loss which would motivate individuals to radicalize (Glasford, 2021). Our findings supported this notion, showing that individuals in the numerical minority experienced feelings of exclusion as measured by need-threats (Williams, 2009). Further, minority group status significantly predicted willingness to engage in radical actions, and further this effect was mediated by both need-threat and ingroup identity. Our findings thus provide insight into the exclusion literature and the radicalization literature, and these contributions are discussed below.

Theoretical contributions

Group composition and feelings of exclusion

A fundamental feature of the study was that we assumed that being in the numerical minority would threaten the fundamental needs as theorized by the temporal need-threat model (Williams, 2009). This assumption was based previous research that has showed that being in the numerical minority impacts feelings of belonging (Glasford, 2021). Our findings supported this assumption. Individuals in the numerical minority (Pro-life supporter living in Pro-choice state, or Pro-choice supporter in a Pro-life state) had significantly higher threatened needs than individuals in the majority (e.g., Pro-life supporter living in Pro-life state). Hence, it can be argued that minority group membership triggers feelings of exclusion. However, this study was conducted in a time when abortion rights were highly discussed, so these findings can only be considered in a context where the cause of exclusion is currently salient. Specifically, in this case, the increased focus on abortion rights following the

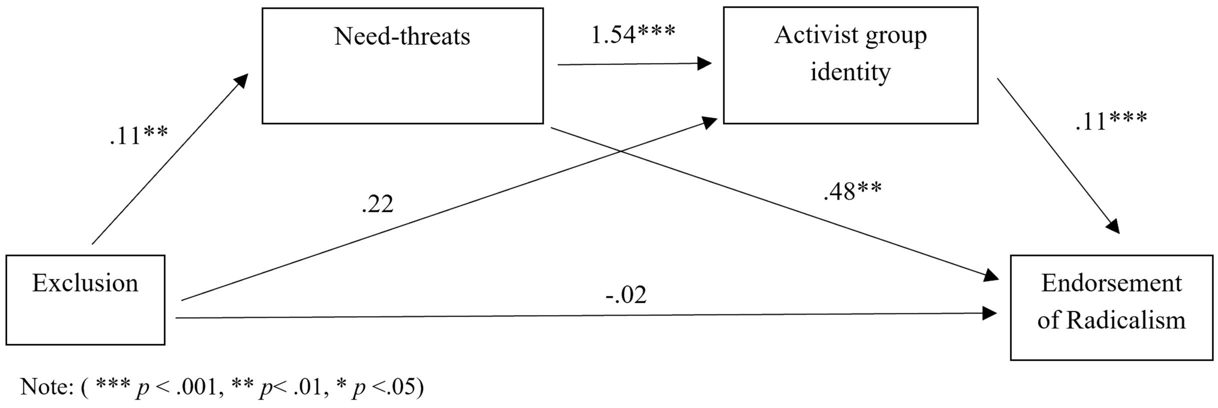


FIGURE 3
Serial mediation model with coefficients for pathway between exclusion and endorsement of radical actions with mediators need-threats and activist group identity.

changes in legislation may make membership to the group (Pro-life/Pro-choice) more pertinent. This conclusion is supported by research showing that identities can become more prominent when a contextual factor makes them salient (Hernández et al., 2021). Thus, focus on group membership due to increasing media and societal attention to abortion rights, may make the effect of minority/majority membership on feelings of exclusion (threatened needs) more prominent. Consequently, in this unique context it can be determined that those in the numerical minority on their abortion stance were feeling societally excluded as demonstrated by their threatened needs. Future research may want to replicate this study and explore if this finding is replicated when an individuals' identity is not salient to explore if numerical group status impacts feelings of exclusion in a similar manner. Nevertheless, the findings confirm previous research that has shown that simple numerical distribution of group members can result in feelings of exclusion (Richman et al., 2011; Glasford, 2021) and to our knowledge it is the first study to demonstrate that this form of exclusion also has the ability to threaten an individuals' fundamental needs as outlined in the temporal need-threat model (Williams, 2009).

Exclusion and radicalization

Given that feelings of exclusion were established in the minority, in line with previous research it was likely that minority individuals would try to establish social connections to fortify their threatened fundamental needs as seen in traditional social exclusion research (Williams, 2007, 2009). In line with previous empirical studies that have demonstrated the causal role that exclusion has with engagement in political and radical actions, we argued that those in the minority would be more willing to participate in and endorse radical actions (Pfundmair, 2019; Renström et al., 2020; Knapton et al., 2022). Our findings confirmed this. The results showed that those in the minority were significantly more willing to participate in radical actions compared to those in the majority. However, there was not a significant effect of minority/majority group status on endorsement of radical actions. Nevertheless, the findings confirmed previous studies that used interpersonal or small group-based exclusion to demonstrate that exclusion can lead to increased willingness to participate when the exclusion occurs at a societal level. This is not surprising given that our findings revealed that those in the minority have reduced fundamental needs, and there is extensive documented research that has revealed the efforts that individuals go to try and restore these needs, including joining radical groups (Williams, 2007, 2009; Knapton et al., 2015; Renström et al., 2020). As such, the study adds to the both the social exclusion literature but also confirms the motivational mechanism to restore significance following the loss of significance due to exclusion as outlined in the quest for significance radicalization model (Kruglanski et al., 2014, 2019). This is an important contribution as there is little empirical evidence that has tested the significance loss model and this confirms the experimental research that has been conducted (Bélanger et al., 2019; Renström et al., 2020).

Identity and radicalization

An important part of our research was to establish an explanatory pathway between exclusion and radical actions. There is extensive research indicating that exclusion can impact identity levels. For instance, feelings of discrimination, exclusion and loss of significance all increase ingroup identity (Branscombe et al., 1999; Verkuyten and Yildiz, 2007; Armenta and Hunt, 2009; Barlow et al., 2012; Cronin et al., 2012; Wiley et al., 2013; Knapton et al., 2022; Milla et al., 2022). Arguably, this is to protect fundamental needs, buffer against the negative effects of exclusion and benefit from the positive status or belonging associated with a collective identity to maintain needs and a feeling of significance (Branscombe et al., 1999; Milla et al., 2022). Given that ingroup identity is an established factor in radical actions, the shift in identity may be a driving factor in the causal link between exclusion and radical actions (Hogg et al., 2010; 2012; Hogg, 2014; Aghabi et al., 2017; Strindberg, 2020; Wagoner et al., 2021; Milla et al., 2022). Thus, we proposed that those in the minority, with threatened fundamental needs would be the most willing to identify with a radical group and in turn most willing to participate in radical actions. As a result, a serial mediation model was run examining the pathway between minority group status and increasing willingness to participate in radical actions and endorsement of radical actions *via* threatened needs and identity. The findings revealed a significant indirect pathway for both dependent variables. Minority individuals who had higher threatened needs showed higher identification with the activist group, which increased willingness to participate in radical actions and to endorse radical actions. Thus, although no main effect of minority group on endorsement of radicalism was found, there was a significant indirect effect *via* need-threat and ingroup identity.

Our findings not only provide insight to a pathway between exclusion and radical actions but also add to the understanding of the rejection-identification model within the backdrop of the temporal need-threat model (Branscombe et al., 1999; Williams, 2009). The findings of the study suggest that a desire to fortify threatened needs may be driving increased identification with an accepting minority group, given that our findings show that it was those with higher threatened social needs who had higher identification with the activist group. Moreover, the study demonstrates that the rejection-identification model can be applied to other contexts than ethnic based discrimination, which has been the focus of most previous research on this model (Verkuyten and Yildiz, 2007; Armenta and Hunt, 2009; Barlow et al., 2012; Cronin et al., 2012; Wiley et al., 2013). The present study highlights that perceived exclusion at a societal level may be due to ones' political beliefs or personal values or simply through the perception of a numerical majority. This is an important contribution given that much of the focus into societal level exclusion explores groups with historical intergroup power differences, whereby the exclusion is examined in relation to occurring a dominant ethnic (often White) majority (Verkuyten and Yildiz, 2007; Armenta and Hunt, 2009; Barlow et al., 2012; Cronin et al., 2012; Wiley et al., 2013). Given research that shows power and status differences in groups can trigger a desire for social change, the effects seen in this study may be stronger in groups with a discrepancy in power and status (Spears et al., 2001; Scheepers et al., 2006). Thus, future research may want to consider replicating this study in other intergroup contexts.

Finally, and arguably most importantly, this study adds to the understanding of the way in which social exclusion may drive willingness to engage in radical activism through a mechanism of identity and provides further support to the existing literature that highlights the important role that identity has regarding individuals' political participation and radical actions (Klandermans et al., 2002; van Zomeren et al., 2008; Borum, 2011; Knapton et al., 2022). The study confirms recent findings demonstrating a link between exclusion, ingroup identity and participation in normative and radical actions (Knapton et al., 2022) but also adds to it by highlighting the role that threatened fundamental needs have regarding driving increased identification. The findings bring together the temporal need-threat model, rejection identification model and the literature exploring social exclusion as a driver of radicalism to provide an explanatory pathway for the link between exclusion, identity, and radical engagement (Branscombe et al., 1999; Williams, 2009). As such, the findings also add to current radicalization models by providing empirical evidence that help encompass several factors, such as loss of significance, belonging, identity, marginalization, societal grievances, all of which are noted in multiple models as driving mechanisms (Moghaddam, 2005; McCauley and Moskalenko, 2008, 2017; Kruglanski et al., 2009, 2014; Borum, 2011).

Methodological contributions

Another important aspect of our study was to explore societal level exclusion using a quasi-experimental design. Much of the radicalization literature highlights radicalization to be a group-based, societal level concept but there is very little empirical evidence in the exclusion literature that has explored the phenomenon in this manner (McCauley and Moskalenko, 2008; Kruglanski et al., 2009, 2014; Kruglanski and Fishman, 2009; Doosje et al., 2016). Given evidence that numerical distribution of a group function as determining minority/majority status and that this can lead to feelings surrounding belongingness, we used the unique geographic divide of abortion opinion in the USA to conduct a quasi-experimental study to explore minority/majority group status as a driver of feelings of exclusion (Glasford, 2021). Participants living in states that matched their opinion (e. g. Pro-life supporter living in Pro-life state) were in the majority and participants living in states incongruent with their personal opinion (Pro-life supporter living in Pro-choice state) were in the minority. Measures of feelings of exclusion using the need-threat scale were conducted and these in turn were used to explore how feelings of belonging due to group membership (minority/majority) can drive willingness to engage in radical actions *via* ingroup identity. Many exclusion paradigms have looked at interpersonal or smaller group- based exclusion, but none have examined the impact on these fundamental needs at a societal level (Williams, 2007). Further, much of the societal level exploration of exclusion has examined exclusion due to ethnicity, and this further confirms previous research that feelings of exclusion can occur due to other factors than ethnic or cultural conflicts, such as in this case, one's opinion on a social issue (Branscombe et al., 1999; Bélanger et al., 2019). Consequently, this study contributes to our methodological understanding of how to explore both exclusion and radicalization and provides support for using quasi-experimental designs to investigate societal level issues in a causal manner and help explain phenomena using mechanisms traditionally explored solely within a controlled experimental context.

Limitations

Although we did not test significance loss directly, there is considerable overlap in features between the significance loss model and the temporal need-threat model, which both state that following an episode of social exclusion individuals will be more receptive and willing to join an extremist group as a way of fortifying belonging and significance (Williams, 2007, 2009; Kruglanski et al., 2014). We use the terms interchangeably such that in line with previous research we assume social exclusion will trigger a loss of significance and motivate radicalization though both a desire to fortify fundamental needs and regain significance (Renström et al., 2020).

One of the limitations surrounds the assumption that those in the minority would be socially excluded. Given that this was a quasi-experiment using naturally occurring groups, there was little control in the extent to which individuals felt excluded/included. Based on the measure of need-threats as used in previous exclusion studies, our results mirrored various controlled, manipulated episodes of exclusion, in that those individuals who were excluded (the minority) in our study showed threatened fundamental needs, compared to those who were included (the majority; Eisenberger et al., 2003; Smith and Williams, 2004; Zadro et al., 2005; Williams, 2007; Carter-Sowell et al., 2008; Knapton et al., 2015). However, this measure was in relation to how they felt regarding their states, and what we can be unsure of is if there are "microcommunities" within those states where likeminded individuals happen to live near on another or if an individual surrounds themselves with friends who are like minded even if they are not physically present in which they feel a sense of belongingness. Nevertheless, given that minority individuals showed threatened needs similar to when exclusion is controlled and manipulated experimentally, the ecological validity this study outweighs any operationalization concerns. Yet, future studies that may use a similar quasi-experimental set up may want to consider ways in which to measure feelings of exclusion in such a context independent of the need-threat measure.

In line with the above, it is important to consider that exclusion is multifaceted. Minority groups who are excluded from society often experience other factors such as lower socio-economic levels or other factors that may put them at a disadvantage (Schmitt and Branscombe, 2002; Stuart et al., 2020). In our study, we did not measure for such socio-economic factors as a confounding variable. Given the sample used was across states and across abortion opinion, it was not expected that there would be a significance difference across socio-economic factors of the naturally occurring groups but future research using a similar research design should consider measuring these variables too.

Another limitation is the lack of a significant finding with regards to the effect of minority group status on endorsement of extreme actions. Although an indirect effect was found *via* a pathway of need-threat and identity, a main effect was expected. A possible reason for this is that we argued that feelings of exclusion as triggered by being a member of a minority group would drive an individual to participate and endorse radical actions due to a need to desire reconnection to restore belongingness needs. A possible reason therefore why we found no effect of minority group status on endorsement of actions is that simply endorsing an action has a minimal social element, compared to participating in radical actions with a group. Thus, it may only be those who identified highly with the group that also then endorsed the actions given that higher ingroup identification is linked to higher endorsement of violent ideology (Milla et al., 2022).

Finally, we examined radical action intentions rather than actual radical action participation. Thus, caution should be taken regarding how much these intentions would reflect real life behavior. Future research should consider asking about previous engagement.

Implications and conclusion

The social exclusion literature has clearly demonstrated the role of exclusion regarding driving political engagement (Bäck et al., 2015, 2021; Knapton et al., 2015; Bäck et al., 2018a; Renström et al., 2020). However, what is the mechanism explaining this link and its role in radical actions and radicalization is less examined although highly discussed from a theoretical and/or qualitative perspective. The quest for significance model of radicalization highlights that an episode of social exclusion may motivate someone to regain their significance *via* radical groups and the temporal need-threat model explains willingness to engage in radicalism *via* a desire to fortify one's fundamental needs (Williams, 2009; Kruglanski et al., 2014). In this paper, these theories are used in unison and along with previous research and theory assume that an episode of exclusion drives a quest for significance *via* the threatened fundamental needs. The findings of our paper support both theories, showing that feelings of exclusion drive willingness to participate in and endorse radical actions, and further that this pathway is mediated by this need to restore needs and significance. However, it also contributes to the literature by demonstrating the role that identity plays, indicating individuals with threatened needs seek out accepting identities and readily identify with an accepting ingroup. As a result, this paper brings together the temporal need-threat model and the rejection identification model in the context of radicalization and uses them as a explanatory pathway for the effect of social exclusion on radical actions. This paper adds to the social exclusion literature by exploring exclusion from a societal perspective in a quasi-experimental way and it helps pave the way for future research to consider exploring naturally excluded groups. It emphasizes that exclusion can be perceived from sheer numerical distribution of group members in a setting and further confirms that even subtle exclusion cues can cause reduced well-being (Gaertner et al., 2008; Wirth et al., 2010; Glasford, 2021) The findings highlight the importance of continuing to explore the nuances in social exclusion from varying intergroup levels and highlights the need to continue to explore the driving role of identity in activism engagement and radicalization.

Finally, there are concerns given the recent changes that there may be an upsurge in violence from both sides of the abortion debate, and these research highlights that this may be likely if individuals continue to feel excluded and isolated in their communities due to their opinion. Abortion is a provocative issue that is surrounded with emotion and possible conflict. This research highlights the need for individuals' opinions to be seen and heard, and for an inclusive community to be fostered to prevent individuals becoming radicalized.

Data availability statement

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

Ethics statement

The studies involving human participants were reviewed and approved by Swedish Ethical Review Authority. The patients/participants provided their written informed consent to participate in this study.

Author contributions

HK, ER, and ML all contributed to conception and design of the study. HK performed the statistical analysis and wrote the first draft of the manuscript. ER and ML provided valuable input for important revisions. All authors contributed to the article and approved the submitted version.

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Conflict of interest

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

Publisher's note

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Appendix A

Given that a **majority** in your state are [**Pro-life/Pro-choice**] you feel (Participants responded on a 5-point scale with 1 indicating *not at all* and 5 indicating *extremely*.):

I feel"disconnected"
I feel rejected
I feel like an outsider
I feel I belong in [STATE OF RESIDENCE]
I feel others interact with me a lot
I feel good about myself
My self-esteem is high
I feel liked
I feel insecure
I feel satisfied
I feel invisible
I feel meaningless
I feel non-existent
I feel important
I feel useful
I feel ashamed
I feel humiliated
I feel hopeless
I feel angry
I feel powerful
I feel I have control over the course of events
I feel I have the ability to significantly alter events
I feel I am unable to influence the action of others
I feel others decided everything

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The relationship between HIV-related stigma and HIV self-management among men who have sex with men: The chain mediating role of social support and self-efficacy

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HIV infection becomes a manageable disease, and self-management is one of the key indicators of achieving optimal health outcomes. Men who have sex with men (MSM) living with HIV face many psychosocial challenges when managing HIV infection, such as sexual minority pressure and HIV-related stigma. Higher perceived HIV-related stigma had been related to low self-management. However, the mechanisms underlying the association between HIV-related stigma and HIV self-management are unclear. Two possible mediators include social support and self-efficacy. This study aimed to examine the relationship between HIV-related stigma and HIV self-management among MSM living with HIV and to explore the single mediating effect of social support and self-efficacy and the chain mediating effect of these two variables on this relationship in China. Convenience sampling was used to recruit participants from the Center for Disease Control (CDC) in Changsha City, Hunan province, China. A total of 459 MSM living with HIV completed questionnaires regarding sociodemographic and disease-related information, HIV-related stigma, social support, self-efficacy, and HIV self-management. Descriptive statistics analysis, one-way ANOVA, independent *t*-tests, Pearson's bivariate correlation, and multiple regression were conducted using the SPSS v24.0. Process macro in SPSS was used to analyze the single and chain mediating effect among variables. Our findings showed that the indirect and total effect of HIV-related stigma on HIV self-management was significant, while the direct effect was not statistically significant. Social support and self-efficacy mediated the relationship between HIV-related stigma and HIV self-management, respectively. Moreover, the chain mediating model confirmed that the association between HIV-related stigma and HIV self-management was mediated by social support and self-efficacy sequentially. Future interventions focusing on improving HIV self-management among MSM living with HIV should consider a multi-faced approach.

KEYWORDS

HIV, men who have sex with men, HIV-related stigma, social support, self-efficacy, self-management

Introduction

With the introduction and widespread use of antiretroviral therapy (ART) to decrease viral loads and prevent the HIV epidemic, HIV infection has become a manageable chronic disease (WHO, 2016; Bassett et al., 2019). However, the rate of new HIV infection is rising rapidly among men who have sex with men (MSM), about 28 times higher than that in general adult men (UNAIDS, 2020). In China, the average HIV infection rate among MSM is 9.2% (Zhuang et al., 2018), far exceeding the standard warning line of 5% for key populations set in international guidelines (UNAIDS, 2021). MSM continues to present the majority of HIV prevalence (Zhuang et al., 2018). Nowadays, the traditional medical model, which focuses on managing a specific disease and relies on the hospital or other health facilities, no longer meets the increased health needs of people living with HIV (PLWH) as the condition requires life-long treatment and PLWH often living with other non-AIDS defining chronic conditions (Zhang et al., 2019a; WHO, 2022a). The World Health Organization (WHO) suggested that self-management is the best practice for chronic care since individuals often require changes in daily lifestyle and day-to-day disease management (WHO, 2002). Self-management refers to the ability of patients to work with caregivers, community, and professionals to manage the physical, psychosocial, and lifestyle consequences of their chronic condition (Lorig and Holman, 2003). Recent studies reported that good self-management could, directly and indirectly, reduce susceptibility to worsening HIV, individual care expenditures, and the burden on healthcare system resources (Zhang et al., 2019b; WHO, 2022b). Given the complexity of the tasks of HIV self-management to achieve optimal outcomes, HIV self-management remains challenging and is influenced by individual, social and physical factors as mentioned in the contextual dimension of the Individual and Family Management Framework (IFSMT; Ryan and Sawin, 2009). Among those influencing factors, HIV-related stigma has been widely proven to be one of the biggest challenges and key predictors of HIV self-management (Sayles et al., 2009; Babel et al., 2021). In addition, according to the IFSMT, the process of enhancing social support and self-efficacy is necessary for chronic conditions management, which may influence HIV self-management behaviors and could be influenced by risk and protective factors in the contextual dimension. However, no studies have focused on the mechanisms underlying the relationship between HIV-related stigma and HIV self-management. Hence, the current study aims to investigate the mediating mechanisms by understanding the factors that mediate the relationship between HIV-related stigma and HIV self-management and provide a reference for improving HIV self-management.

The association between HIV-related stigma and HIV self-management

Since the beginning of the HIV epidemic, PLWH have experienced various forms of HIV-related stigma, especially among marginalized groups such as MSM. There is a growing body of conceptual frameworks indicating that perceived HIV-related stigma decreases MSM living with HIV in getting appropriate treatment (Meyer, 2003; Stangl et al., 2019; Batchelder et al., 2021). Previous empirical studies also proved that stigma was associated with short-term behavior changes, such as lower medication adherence and more sexual risk behaviors, and the impact of behaviors on long-range adverse health outcomes, like depression and poor quality of life (Wu et al., 2015; Yigit et al., 2020; MacLean and Wetherall, 2021; van der Kooij et al., 2021). However, Zeng et al. (2020) revealed that anticipated stigma among PLWH did not directly and significantly predict self-management behaviors, including the level of treatment adherence. Due to the inconsistent results of the study, stigma may be indirectly associated with HIV self-management through other mediators, which has been ignored in most research. Furthermore, previous studies only explored the association between stigma and HIV self-management among general PLWH (Webel et al., 2012b; Wang H. et al., 2019; Wang H. H. et al., 2019; Areri et al., 2020a), and limited evidence from MSM living with HIV. Therefore, it is critical to explore potential pathways underlying HIV-related stigma and HIV self-management among MSM living with HIV.

Mediating effect of social support

Social support might be a potential mediator in explaining how HIV-related stigma may lead to poor self-management. However, few studies have investigated whether social support operates as a mediator for the negative effects of HIV-related stigma on HIV self-management. According to the IFSMT (Ryan and Sawin, 2009), improving social support (e.g., peers and family support and use of communications) is necessary for chronic conditions management. Home and community environments have a critical influence on the intention of patients to obtain support. However, stigma toward PLWH often occurs in families, communities, and healthcare settings (Marshall et al., 2017; Nyblade et al., 2019). Numerous studies have shown that patients who experienced and anticipated stigma are less willing to disclose their HIV status to others for fear of rejection and exclusion, which motivates them to avoid the social situation (Parker and Aggleton, 2003; Hedge et al., 2021; Ndione et al., 2022). Meanwhile, previous studies have confirmed that a high level of social support was linked with optimal self-management behaviors (Aguilera-Mijares et al., 2022). For example, Du et al. (2018) indicated that a better social support MSM living with HIV obtained was associated with higher condom use intentions. Despite growing evidence of the positive impact of social support, the role of social support in the relationship between HIV-related stigma and HIV self-management remains unclear. Based on existing evidence (Ryan and Sawin, 2009; Du et al., 2018), the present study hypothesizes that the impact of HIV-related stigma on HIV self-management will be mediated by social support.

Mediating effect of self-efficacy

Self-efficacy might be another potential mediator explaining the pathway from HIV-related stigma to HIV self-management. On the one hand, HIV-related stigma and self-efficacy are closely related. Zhou et al. (2020) conducted a study among 2,987 PLWH and found that self-efficacy tends to be lower among those who reported a higher HIV-related stigma. On the other hand, the link between self-efficacy and HIV self-management has been well established. Empirical and conceptual studies asserted that patients with higher self-efficacy are more likely to engage in effective healthcare strategies and demonstrate better persistence and effort to achieve successful viral suppression and obtain a better quality of life (Bandura, 1989; Johnson et al., 2007; Ryan and Sawin, 2009; Khumsaen and Stephenson, 2017). A study in China (Zhang et al., 2016) indicated that adherence self-efficacy was positively associated with HIV self-management, like medication adherence, among PLWH. Although the mediation role of self-efficacy between HIV-related stigma and HIV self-management has not been investigated, it has been found to be a mediator between stigma and medication adherence (Seghatol-Eslami et al., 2017), indicating that self-efficacy could buffer the negative impact of HIV stigma on behaviors in PLWH. Considering the association of self-efficacy with HIV self-management and stigma (Zhang et al., 2016; Zhou et al., 2020), self-efficacy may alleviate the negative effect of HIV-related stigma and further improve HIV self-management.

The chain mediating effect of social support and self-efficacy

As we hypothesized, social support and self-efficacy mediate the relationship between HIV-related stigma and HIV self-management. However, when they were both considered to be mediators, what was the relationship between social support and self-efficacy? Which one played a more critical moderating role? According to the IFSMT (Ryan and Sawin, 2009), social support and self-efficacy in the self-management process are interrelated, which means better social support is internally related to higher self-efficacy. Aligning with the IFSMT, Zakiei et al. (2022) suggested that social support from family, friends, and others could indirectly affect risky behaviors through self-efficacy. Many studies have proven that the more social support patients perceive, the higher the possibility that they believe in their abilities to master disease management tasks (Levitt et al., 2017; White et al., 2020). Given the theory and empirical evidence (Ryan and Sawin, 2009; Zakiei et al., 2022), the present study hypothesizes that social support and self-efficacy will serially mediate the relationship between HIV-related stigma and HIV self-management.

In summary, although the relationships among the variables of stigma, social support, self-efficacy, and health behaviors have been examined separately, the role of social support and self-efficacy in the impact of HIV-related stigma on HIV self-management among MSM living with HIV has not yet been thoroughly tested to date. Hence, we used IFSMT as the framework to test the relationship between HIV-related stigma and HIV self-management and the mechanical roles of social support and self-efficacy among MSM living with HIV. Based on previous research, we proposed three main hypothesized models (Figure 1):

> *Hypothesis 1:* HIV-related stigma might have a negatively predictive effect on HIV self-management.
>
> *Hypothesis 2:* Social support would act as a mediator between HIV-related stigma and HIV self-management.
>
> *Hypothesis 3:* Self-efficacy would act as a mediator between HIV-related stigma and HIV self-management.
>
> *Hypothesis 4:* Social support and self-efficacy would jointly act as a chain mediating role in the relationship between HIV-related stigma and HIV self-management.

Materials and methods

Participants

This cross-sectional study was conducted from October 2021 to January 2022. By convenience sampling, all participants were recruited from the Center for Disease Control (CDC) in Changsha City, Human Province, China. A set of self-reported questionnaires were used to collect data. A total of 473 questionnaires were distributed, of which 459 questionnaires were valid. Fourteen questionnaires (3%) were excluded due to participants dropping out in the middle of the process, resulting in an efficiency of 97.0%. The inclusion criteria were: (a) men meeting the Chinese Ministry of Health's diagnostic criteria for HIV; (b) self-reported

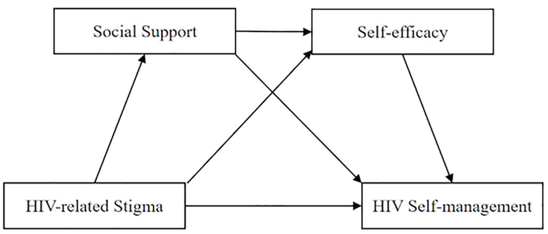

FIGURE 1
Hypothesized relationship among HIV-related stigma, social support, self-efficacy, and HIV self-management.

ever having sex with another man within the last 6 months; (c) 18 years or older; (d) provided informed consent; and (e) volunteered freely for the study. We asked a couple of questions to assess participants' eligibility and excluded those with a severe mental disorder and linguistic or cognitive impairment.

Procedures

The Ethics Committee approved all the study procedures of XXX. Participants were recruited by convenience sampling when they came to the AIDS department of CDC to get HIV health counseling or services. Four trained CDC staff introduced our project to the potential participants, and if they were willing to join this study, they were contacted and invited by the trained investigators. Before the investigation, the investigators explained the study's purpose, content, significance, and potential risks to the participants. All participants provided written informed consent and voluntarily participated in the study. Subsequently, the investigators distributed paper-based questionnaires and explained the filling requirements to the respondents. All questionnaires were self-reported, and participants completed them independently in a private and quiet room to ensure privacy. A face-to-face interview was used for patients with limited reading ability to help them complete questionnaires.

Measures

Demographic and disease-related variables

The research team designed the demographic survey to gather participants' demographic information including age, educational level, residence, marital status, and monthly household income. HIV-related information, including HIV infection route, years of HIV diagnosis, comorbidities, and drug side effects, was also collected.

HIV self-management

The HIV Self-management Scale (HIVSMS) developed by Webel et al. (2012a), as revised by Han et al. (2019), was adopted to measure HIV self-management of PLWH. The scale consists of 20 items across three dimensions: daily physical health practices, activating HIV support groups, and living with chronic HIV conditions. The HIVSMS was scored on a four-point Likert scale (0 = not applicable, 1 = none of the time, 2 = some of the time, and 3 = all the time), with a higher score indicating a better status of self-management. The Chinese version of HIVSMS has good reliability, which has been applied and verified in Chinese PLWH (Wang H. et al., 2019). The Cronbach's alphas of the subscales in this study are reported from 0.71 to 0.86.

HIV-related stigma

HIV-related stigma was assessed using a brief version of Berger's Stigma Scale (HSS), which was developed by Berger et al. (2001) and shortened by Wright et al. (2007). The scale includes 10 items that inflect personalized stigma, disclosure concerns, negative self-image, and public attitudes. Each item's statements were rated on a four-point Likert response ranging from 1 (strongly disagree) to 4 (strongly agree), giving composite scores ranging from 10 to 40. The higher the total score indicated the higher level of HIV-related stigma. In the current study, the Cronbach's alpha of the entire scale was 0.87.

Social support

Social support was assessed using the Social Support Rating Scale (SSRS), initially designed in Chinese by Xiao (1994). The scale contains three subscales and 10 items, including subjective support, objective support, and the utilization of support. The composite scale score was the total of all items' scores, and possible scores ranged from 12 to 66. The higher score a participant obtained, the better social support they had. The SSRS has been demonstrated to be a reliable and valid measure for assessing social support status in Chinese MSM living with HIV samples (Liu et al., 2017). In the study, the Cronbach's alpha of the whole scale was 0.80.

Self-efficacy

Self-efficacy was measured using the Self-efficacy for Managing Chronic Disease Scale (SEMCDS) compiled by Lorig et al. (2001). The scale consists of six items and two subscales, symptom management self-efficacy and general self-efficacy. All items' response options were measured on a 10-point Likert scale from 1 (no confidence at all) to 10 (extremely confident). Items were summed to get a total score ranging from 6 to 60, with higher scores indicative of higher levels of self-efficacy. The SEMCDS has been extensively validated with good psychometric properties among Chinese MSM living with HIV (Li et al., 2021). The overall Cronbach's alpha in this study was reported to be 0.93.

Data analysis

Descriptive statistics of sociodemographic and disease-related characteristics and variables of interest were reported. Frequency and percentage were used to describe categorical variables. Continuous variables such as scale total scores were reported on the mean (*M*) and standard deviation (*SD*). One-way ANOVA and independent *t*-tests were used to examine the differences in HIV self-management among sociodemographic characteristics and disease-related factors. Multiple linear regression analysis was conducted to further explore the associated factors if they had statistical significance in univariate analysis. Pearson correlation analyses were performed to examine whether there is a correlation between HIV stigma, social support, self-efficacy, and HIV self-management.

The direct and indirect effects of HIV-related stigma on HIV self-management were examined using bootstrap analyses with 5,000 bootstrap samples (Hayes, 2013). Adjusting for covariates that were significant in multivariate regression analysis, hypothesized single and chain mediation models were examined through the macro-program PROCESS 3.5 developed by Hayes (Preacher and Hayes, 2008; Hayes, 2013). Single mediation models of HIV-related stigma to HIV self-management through social support and self-efficacy were examined using PROCESS Model 1 (Preacher and Hayes, 2008). The chain mediation model was conducted to examine the path between two mediators in sequence and the indirect effects of each mediator independently using PROCESS Model 6 (Hayes, 2013). The mediating effect was significant if the 95% bias-corrected confidence interval did not include zero. A value of p of 0.05 (two-tailed) was considered statistical significance. All the data analyses and processing were completed using IBM SPSS v24.0 software.

Results

Common method biases tests

Due to a single source of data, Harman's single-factor test was used to reduce the common method biases. The results revealed 13 factors with an eigenvalue greater than 1, and the total variation explained by the first factor was 16.73%, which was far lower than the critical value of 40%. Thus, there were no apparent common method biases in the data.

Descriptive statistics

Table 1 presents participants' sociodemographic and HIV-related characteristics and the corresponding distributions of HIV self-management scores. Overall, the mean age of the 459 participants was 30 years old ($SD = 8.64$, range: 18–76). The total HIV self-management score was 39.60. Monthly household income, infection route, comorbidities, and drug side effects were significantly associated with HIV self-management in univariate analyses. The multiple linear regression analyses included all the significant variables found in univariate analyses, that comorbidities and drug side effects were statistically significantly associated with HIV self-management, and were included in the single and chain mediation models as covariates. Participants with comorbidities or drug side effects reported a lower level of HIV self-management.

Bivariate correlations among main variables

As shown in Table 2, higher HIV-related stigma was correlated with lower social support ($r = -0.338$, $p < 0.001$), lower self-efficacy ($r = -0.295$, $p < 0.001$), and lower HIV self-management ($r = -0.141$, $p < 0.01$). Higher social support was correlated with higher self-efficacy ($r = 0.294$, $p < 0.001$) and better HIV self-management ($r = 0.240$, $p < 0.001$). Higher self-efficacy was correlated with better HIV self-management ($r = 0.349$, $p < 0.001$).

Single mediation model

We examined the single mediation effect of social support and self-efficacy on the relationship between HIV-related stigma and HIV self-management after controlling comorbidities and drug side effects, respectively. In the model with social support as the mediator, lower HIV-related stigma predicts higher social support ($\beta = -0.359$, $p < 0.001$), and higher social support predicts better HIV self-management ($\beta = 0.249$, $p < 0.001$; Figure 2). A significant indirect effect of HIV-related stigma on HIV self-management *via* social support was found and the mediating effect value was −0.122 [Bootstrap 95% CI: −0.190, −0.064]. These results supported our hypothesis 1.

In the model with self-efficacy as the mediator, lower HIV-related stigma predicts higher self-efficacy ($\beta = -0.266$, $p < 0.001$), and higher self-efficacy predicts better HIV self-management ($\beta = 0.307$, $p < 0.001$; Figure 3). The path coefficients of HIV-related stigma on HIV self-management revealed that the indirect effect *via* self-efficacy was statistically significant. The mediating effect of self-efficacy was −0.095 [Bootstrap 95% CI: −0.155, −0.029]. These results also supported our hypothesis 2. Meanwhile, since the indirect effect of social support (−0.122) was slightly higher than self-efficacy (−0.095), social support was a stronger mediator than self-efficacy.

Chain mediation model

Table 3 displays the coefficients and significance of each path in the chain mediation model. We found that the total effect ($\beta = -0.123$, $p = 0.023$; Figure 4A) of HIV-related stigma on HIV self-management was significant, which means that the higher HIV-related stigma, the less likely the HIV self-management among MSM living with HIV. The results confirmed that HIV-related stigma had a direct and significant negative prediction on the level of social support ($\beta = -0.359$, $p < 0.001$) and self-efficacy ($\beta = -0.175$, $p = 0.001$). Social support ($\beta = 0.183$, $p = 0.001$) and self-efficacy ($\beta = 0.261$, $p < 0.001$) directly and significantly predict the status of HIV self-management. Meanwhile, social support can also directly and significantly predict self-efficacy ($\beta = 0.254$, $p < 0.001$; Figure 4B).

Results of the chain mediation analyses in Table 4 indicated the total indirect effect was −0.135 [Bootstrap 95% CI: −0.191, −0.085], while the direct effect was 0.017 [Bootstrap 95% CI: −0.137, −0.0177], suggesting the direct effect was not significant. Specifically, the total indirect effect between the relations of HIV-related stigma on HIV self-management includes three pathways. The indirect mediating effect of HIV-related stigma on HIV self-management through social support and self-efficacy was −0.066 ($\beta = 0.261$, $p < 0.001$) and − 0.046 ($\beta = 0.261$, $p < 0.001$),

TABLE 1 Baseline characteristics and difference in the score of HIV self-management.

Variables	*N* (%)[a]	Self-management (*M*±*SD*)	*t*/*F*[b]	*p*
Total	459(100)	39.60 ± 8.31		
Age			0.421	0.656
≤30	225(49.0)	39.64 ± 8.22		
30–40	179(39.0)	39.28 ± 8.34		
>40	55(12.0)	40.45 ± 8.64		
Educational level			0.352	0.704
Senior high school or lower	78(17.0)	39.474 ± 8.13		
Junior college	146(31.8)	39.18 ± 8.53		
Undergraduate or higher	235(51.2)	39.90 ± 8.25		
Residence			0.393	0.531
Countryside	225(49.0)	39.35 ± 8.56		
City/town	234(51.0)	39.84 ± 8.07		
Marital status			0.828	0.363
Married	153(33.3)	40.10 ± 8.67		
Unmarried	306(66.7)	39.35 ± 8.12		
Monthly household income (Chinese yuan)			3.365	0.035
<10,000	184(40.1)	38.98 ± 8.61		
10,000–20,000	142(30.9)	38.94 ± 7.72		
≥20,000	133(29.0)	41.17 ± 8.33		
Infection route			5.558	0.011
Fixed partner	56(12.2)	42.64 ± 8.60		
Other partners	351(76.5)	39.07 ± 8.20		
Other infection routes	52(11.3)	39.60 ± 8.31		
Yeas since HIV diagnosis			0.846	0.358
<5	269(58.6)	39.35 ± 8.31		
≥5	190(41.4)	40.08 ± 8.29		
Having comorbidities			16.297	<0.001
No	388(84.5)	40.26 ± 8.12		
Yes	71(15.5)	36.00 ± 8.46		
Having drug side effects			9.346	0.002
No	208(45.3)	40.89 ± 8.61		
Yes	251(54.7)	38.53 ± 7.90		

[a] Numbers are unweighted, but percentages are weighted.

[b] *t*, *t* test; *F*, one way ANOVA.

TABLE 2 Means, standard deviations, and correlations for study variables (*N* =459).

		M	*SD*	1	2	3	4
1	HIV-related stigma	28.47	5.89	1			
2	Social support	30.69	7.55	−0.338***	1		
3	Self-efficacy	42.07	10.76	−0.295***	0.294***	1	
4	HIV self-management	39.60	8.31	−0.141**	0.240***	0.349***	1

**$p < 0.01$, ***$p < 0.001$.

respectively. The bootstrap's 95% CI did not overlap the zero, indicating the two indirect pathways were statistically significant. Importantly, supporting our hypotheses, the indirect effect of chain mediation from HIV-related stigma to HIV self-management *via* social support and self-efficacy was significant, and the effect value was −0.024 [Bootstrap 95% CI: −0.042, −0.010]. In conclusion, the results mean that social support and self-efficacy play a full mediating role in the relationship between HIV-related stigma and HIV self-management. The chain mediation model is shown in Figure 4.

Discussion

The present study explored the mediating role of social support and self-efficacy on the association between stigma and HIV self-management among MSM living with HIV based on the IFSMT. The results of parallel mediation analyses supported the hypotheses and confirmed the mediating role of social support and self-efficacy in the relationship between HIV-related stigma and HIV self-management. In addition, the chain mediation analyses suggested a significant serial between social support and self-efficacy.

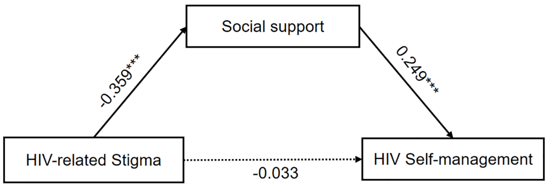

FIGURE 2
The single mediation role of social support in the relationship between HIV-related stigma and HIV self-management. The solid line and dashed line indicated significant and non-significant path coefficients, respectively. ***p <0.001.

In this study, the level of HIV self-management was higher than that found in general Ethiopian PLWH (Areri et al., 2020a), and lower than the finding reported among women living with HIV in the United States (Webel et al., 2013) and general PLWH in Korea (Kim et al., 2015). Compared to the United States and Korea, the implementation of HIV self-management model was later in china. We also found that patients living with comorbidities and side effects had a lower level of HIV self-management and controlled comorbidities and side effects as covariables in the mediating model. This finding was in accordance with the finding of Wang H. H. et al. (2019) and Areri et al. (2020b). This could be because comorbidities and side effects increase the complexity of medication management and pose a significant challenge to HIV self-management. Besides, those patients with comorbidities and drug side effects have worse health conditions and do not have enough energy to manage their disease (Areri et al., 2020b).

The current study also showed that higher HIV-related stigma was associated with a lower level of HIV self-management among MSM living with HIV after controlling comorbidities and drug side effects, which is obviously consistent with our first hypothesis and previous studies (Balaji et al., 2017; Turan et al., 2017; Xie et al., 2017). For instance, Balaji conducted a research among 9,819 MSM living with HIV indicating that a significant proportion of patients reported experiencing stigma and these experiences related to a host of risky sexual behaviors (Balaji et al., 2017). Xie also suggested that the family's acceptance of the HIV diagnosis and absence of stigma had particularly positive influences on patients' treatment adherence and emotional states (Xie et al., 2017). Additionally, as a sexual minority population, MSM living with HIV may experience intersectional forms of stigma for multiple stigmatized identities (e.g., sexual minority and HIV infection; Berger, 2022). Although we did not examine sexual minority stigma, previous studies have shown that multiple forms of stigma could interact to affect health behaviors among MSM living with HIV, especially in China, which emphasizes heterosexual marriage, having children, and filial piety to parents (Sun et al., 2020; Yang et al., 2020). Future studies may consider

TABLE 3 Regression coefficients in the serial mediation analysis.

Predictor variable	R^2	F	β	p	t	$LLCI$	$ULCI$
Equation 1 Outcome variable: Social support							
Stigma	0.155	21.007	−0.359	<0.001	−7.063	−0.561	−0.317
Equation 2 Outcome variable: Self-efficacy							
Stigma	0.195	20.726	−0.175	0.001	−3.285	−0.493	−0.124
Social support			0.254	<0.001	4.815	0.217	0.517
Equation 3 Outcome variable: HIV self-management							
Stigma	0.158	12.817	0.012	0.826	0.220	−0.132	0.165
Social support			0.183	0.001	3.273	0.081	0.326
Self-efficacy			0.261	<0.001	4.723	0.118	0.286

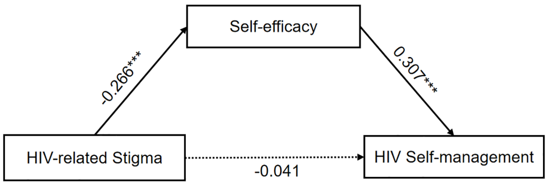

FIGURE 3
The single mediation role of self-efficacy in the relationship between HIV-related stigma and HIV self-management. The solid line and dashed line indicated significant and non-significant path coefficients, respectively. ***p <0.001.

TABLE 4 Total, direct, and indirect effect of HIV-related stigma on HIV self-management though social support and self-efficacy.

Effect	Estimate	Boot SE	Bootstrap 95% CI	
			Low	High
Total effects	−0.168	0.072	−0.328	−0.046
Direct effects	0.017	0.080	−0.137	0.177
Total indirect effects	−0.135	0.027	−0.191	−0.085
X → M1 → Y	−0.066	0.023	−0.114	−0.024
X → M2 → Y	−0.046	0.018	−0.087	−0.014
X → M1 → M2 → Y	−0.024	0.008	−0.042	−0.010

X = HIV-related stigma; Y = HIV self-management; M1 = social support; and M2 = self-efficacy.

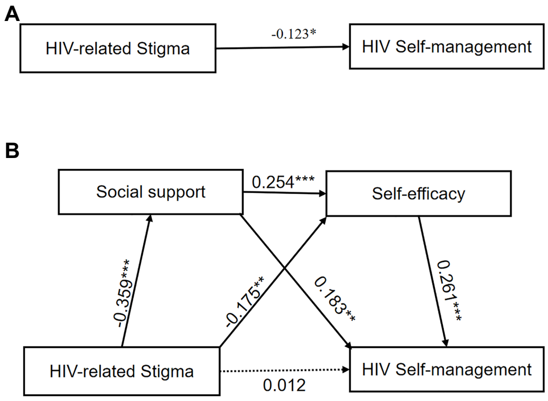

FIGURE 4
(A) The chain mediation role of social support in the relationship between HIV-related stigma and HIV self-management. **(B)** The solid line and dashed line indicated significant and non-significant path coefficients, respectively. *p <0.05, **p <0.01, ***p <0.001.

helping MSM living with HIV seek more sources to address intersectional stigma.

In line with our second expectations, the present study's finding suggested that HIV-related stigma could work on HIV self-management *via* social support. A previous study conducted by Chan et al. (2020), suggested that psychosocial syndemics, including social isolation and poor mental health, mediated the relationship between HIV-related stigma and sexual risk behaviors. The support PLWH got from social networking, especially from families was seen to be helpful through reminding medication time, and providing information, material, financial, and mental support. Patients with more social support tend to adopt various strategies to achieve long-term HIV self-management goals and alleviate negative influences in daily life. However, those who experienced stigma often developed self-stigma toward their identity and were more likely to withdraw from social interaction due to fear of being stigmatized, excluded, or abandoned by family members and health providers, which in turn leads to limited use of social resources and poor health behaviors (Li et al., 2017; Turan et al., 2017; Schrimshaw et al., 2018). Areri et al. (2020b) proved that stigma was the main obstacles to share experiences with others to get access to health resources and support. Therefore, working to eliminate HIV-related stigma and establish a complete social support system are essential aspects of HIV self-management.

Consistent with the third hypothesis, decreasing HIV-related stigma may lead to a higher level of self-efficacy, which can positively impact behaviors. Our finding is congruent with a published study indicating that individuals with less internalized stigma were tend to be with more self-efficacy in adhering to ART, which facilitates them in conducting better HIV self-management regarding taking medicines (Yigit et al., 2020). HIV-related stigma increases the complexities surrounding HIV self-management, which may cause patients to perceive themselves as inferior and leads to less confidence in their abilities to overcome self-management tasks and achieve goals. From the perspective of the social cognitive theory (Bandura, 1989), self-efficacy could directly affect the formation of health behavioral motivation and control of HIV self-management. The present study further supports this finding and suggests that MSM living with HIV with a lower level of HIV-related stigma are more likely to sustain efforts in the face of frustrations and difficulties during the disease condition, which leads to changed HIV self-management.

Furthermore, our most notable finding is that HIV-related stigma had an impact on HIV self-management through the chain mediation of social support and self-efficacy, namely individuals with less stigma would firstly perceive more social support and then increase self-efficacy, which promotes their HIV self-management finally. This result supports our hypotheses and expands upon existing researches indicating that social support provides the necessary tools and information to assist patients in developing the skills to increase their confidence and regularly contact the healthcare system to address problems (Turan et al., 2016; Thaker et al., 2018). Cabral et al. (2018) confirmed that peer support could share common beliefs, help patients more effectively cope with stressful life events, and keep them engaged in the clinic. Voisin et al. (2017) also reported that MSM living with HIV with higher self-efficacy and an external environment of high social support were more likely to engage in health care. The IFSMT (Ryan and Sawin, 2009) offered a good explanation for such effects. This theory demonstrates that individual perceptions of external social resources, including perceived social support, affect patients' desire and confidence to manage complex regiments, such as self-efficacy, thereby affecting engagement in positive and effective behaviors, which was manifested as HIV self-management in this study (Ryan and Sawin, 2009). Above all, extra social support is required to reduce patients' perception of HIV-related stigma and help them come to believe in their ability to master skills to overcome problems, thus promotes HIV self-management.

The findings of this study extend our understanding of the status and influencing factors of HIV self-management and reveal ways in which HIV self-management could be improved. This study might have several clinical implications. First, the present study pinpoints the need for interventions to reduce HIV-related stigma. Structural efforts to educate the uninfected population and health providers on the vulnerability experienced by PLWH may reduce social stigma to patients and facilitate their participation in HIV care (Kerr et al., 2022). Effective intervention and strategies are needed to address HIV-related stigma as a barrier to HIV self-management among MSM living with HIV. Second, a better social support environment should be created that will improve patients' family network and community relationships, and further enhance their confidence in their ability to achieve control of their health. Finally, while several interventions solely targeted stigma, social support (Giordano et al., 2016), or self-efficacy (Areri H. A. et al., 2020) as methods of improving HIV self-management, our study suggests that future interventions should combine the efforts in decreasing stigma, motivating social support and self-efficacy, and improving engagement of health care behaviors. Comprehensive interventions addressing HIV-related stigma, social support, and self-efficacy would generate more significant benefits for adjusting behaviors than that intervention targeting a single factor.

Inevitably, several limitations in this study should be acknowledged. First, the current study was a cross-sectional design, which excluded us from capturing longitudinal trends and establishing causality. Future longitudinal studies should be designed to explore causal inferences and further test and verify the reliability of our results (Zeng et al., 2020). Second, the sample only included MSM living with HIV from one city in China, so the generalizability of our study was limited and we cannot claim our findings fully represent the entire MSM living with HIV. Finally, our data were collected through self-report questionnaires or face-to-face interviews of patients with limited reading ability, which would be influenced by potential reporter bias due to social desirability (Yigit et al., 2020). Collecting data from other resources (e.g., family, friends, and healthcare) may minimize the influence of reporter bias. Moreover, future studies should use more objective measurements to collect data.

Conclusion

The current study not only explored the mechanism of HIV-related stigma on HIV self-management in a Chinese MSM living with HIV, but also extended the application of IFSMT in the HIV self-management field. These findings indicated that social support and self-efficacy play as both individual mediators and chain mediators in the relationship. Given the mediating effect of social support and self-efficacy on HIV self-management, programs related to social support and self-efficacy should be designed to enhance HIV self-management among MSM living with HIV who report high levels of HIV-related stigma in China and other global settings.

Data availability statement

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

Ethics statement

This study involving human participants were reviewed and approved by Xiangya Nursing School, Central South University. The patients/participants provided their informed consent to participant in this study.

Author contributions

YT, XX, and HW designed the work. YT and XX collected the data. YT, JM, and HW analyzed and drafted the manuscript. YT, XX, JM, and HW revised the manuscript. All authors contributed to the article and approved the submitted version.

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Conflict of interest

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

Publisher's note

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Design and study of psychometric properties of the Community Attitude to Abortion Scale (CAAS) with the Chilean population: Autonomy and Stigma

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Introduction: Attitudes toward abortion are related to structural, cultural, and direct gender-based violence. This violence can affect women's mental, physical and reproductive health. Therefore, it is essential to know the nature of community attitudes toward abortion. Since we currently do not have an instrument that measures attitudes towards abortion in Chile, we set the objective of this study to design the *Community Attitude to Abortion Scale (CAAS)* and analyze its psychometric properties in a Chilean community population.

Methods: This work is an instrumental design study. Using a sampling of panelists by sociodemographic quotas, we obtained a sample of 1,223 participants with a mean age of 36.7 years (*SD*=13.56).

Results: As a result, we obtained a scale of 18 items and two correlated factors, *Autonomy* and *Stigma*. This structure fits better as an Exploratory Structural Equations Model (ESEM). Both factors have excellent internal consistency. In addition, we obtained evidence of concurrent and discriminant validity: The scores on the factors of the Universal Religious Involvement Scale (I-E12) correlated negatively with *Autonomy* and positively with *Stigma*; participants with low levels of identification with a right-wing political orientation, with high levels of identification with a leftwing, pro-feminist, pro-LGBTQ +, and pro-euthanasia political orientation, obtained higher mean scores on *Autonomy* and lower on *Stigma*.

Discussion: The CAAS is an adequate tool for use with the Chilean community population, with evidence of consistency and validity. La CAAS is the first tool to measure attitudes to abortion in this country.

KEYWORDS

attitudes, abortion, scale, psychometric properties, autonomy, stigma, religiosity, political orientation

Introduction

Attitudes toward abortion are a relevant construct to understand opinion trends, violence against women in the framework of reproductive rights, and the legislative changes that have occurred on this matter in recent years in various countries. This is the case in Chile, where abortion has recently been legalized in some circumstances, after decades of prohibition and with varying acceptance levels. However, the number of instruments that measure this construct with adequate psychometric properties is scarce. Furthermore, none of them has been adapted with success or designed for the Chilean population. For this reason, we set the objective of this research to design the *Community Attitude to Abortion Scale (CAAS)* and analyze its psychometric properties in the Chilean community.

Attitudes towards abortion are conceptualized as a lasting organization of beliefs and cognitions endowed with an affective charge. This affective charge can be in favor or against the voluntary interruption of pregnancy (VIP) and predisposes to actions consistent with said cognitions and affects (Festinger, 1964). According to the Theory of the Triangle of Violence (Galtung, 1990), the expression of negative attitudes as a form of gender violence is exerted through three closely related dimensions: structural, cultural, and direct. This conceptualization is consistent with the Ecological Models of Abortion Stigma (Kumar et al., 2009) and the proposal of the Bellagio group on the levels at which it operates this stigma (Hessini, 2014).

Structural violence against abortion

Negative attitudes towards abortion are associated with less agreement with policies supporting access to abortion (Patev et al., 2019a; Cutler et al., 2021). From a structural perspective, we find very diverse forms of legislation against reproductive rights at the international level, with the strictest restrictions being classified as a violation of human rights (Human Rights Committee, 2018). Chile is positioned as one of the Latin American countries with a more restrictive legislative tradition (Ramos, 2016; Dides-Castillo and Fernández, 2018; Maira et al., 2019). Except between 1931 and 1989, years in which therapeutic abortion was legal, abortion has been considered a crime under any circumstance from 1874 (Donoso and Vera, 2016; Osorio, 2022) until 2017, the year in which Law 21,030 re-decreed the legality of abortion for three causes: (Festinger, 1964) risk of death for the woman; (Galtung, 1990) lethal fetal in viability; and (Kumar et al., 2009) violation (Ministerio de Salud, 2017). However, other forms of structural violence derive from this Law. For example, the institutional conscientious objection, unequal access to abortion services depending on the place of residence or socioeconomic level, lack of information regarding the Law to guarantee its access, and insufficient training and participation of the personnel regarding the VIP (Frez, 2018; Robledo, 2018; Marshall and Zúñiga, 2020).

Cultural violence against abortion

At a cultural level, negative attitudes towards VIP are based on beliefs, values, and social norms of a traditional and conservative nature—for example, the value of responsibility and care for others over self-determination and the archetypes of femininity (female sexuality only for reproduction, the inevitability of motherhood, and the instinctive care of children). Another example is the defense of respect for the right to life from conception to natural death (Bègue, 2001; Kumar et al., 2009; Vitti and Cabello, 2010; Norris et al., 2011; Piazza, 2012; Clements, 2014; Adesse et al., 2016; Pfeffer, 2017; Prusaczyk and Hodson, 2018). These values outline VIP as selfish behavior, which transgresses the essential nature of women, and even as murder, leading to the stereotyped characterization of women who abort as unintelligent, inferior, sinful, dirty, unreliable, incomplete, and promiscuous (Shellenberg et al., 2014; Sorhaindo et al., 2014; Adesse et al., 2016). In Chile, people oppose abortion, describing the woman who interrupts her pregnancy as cold, insensitive, irresponsible, and selfish (Pérez et al., 2020).

These beliefs, values, and social norms can vary in intensity and content not only between individuals but also between social groups and sociocultural settings or countries. Consistent with this, also the conceptualization and expression of attitudes and stigma toward abortion (Kumar et al., 2009; Hanschmidt et al., 2016). At the group level, these values and beliefs are part of the foundation of religious doctrines and right-wing political orientation. Both are social identities with significant weight in forming personal identity and correlate of greater importance in explaining attitudes towards abortion (Bahr and Marcos, 2003; Hendriks, 2012; Lizotte, 2015; Patev et al., 2019a,b; Pérez et al., 2020; Cutler et al., 2021; Osborne et al., 2022; Pérez et al., 2022). Thus, those who identify with these groups often question other identities, rights, or individual freedoms closely related to these values (Hessini, 2014). For example, religiosity is associated with the rejection of sexual minorities, a relationship explained by authoritarianism and traditional beliefs about gender (Janssen and Scheepers, 2019); it is an essential indicator of the refusal of euthanasia, a practice that defies the religious mandate that only God can take life (Stets and Leik, 1993; Pfeffer, 2017; Francis et al., 2019); and it is also an antagonistic identity to feminism in gender issues, becoming an indicator of hostile sexism when both identities coexist in the same individual (Hernandez, 2021). In Chile, the position of religious groups against the VIP has been verified, exerting their power and influence on public opinion (Dides-Castillo and Fernández, 2018; Nicholls and Cuestas, 2018; Elgueta et al., 2019; Marshall and Zúñiga, 2020; Pérez et al., 2020, 2022).

We found differences in attitudes toward abortion between countries, according to variations of impact on society of conservative social groups and the beliefs, values, and social norms that support them. For example, Bahr and Marco (Bahr and Marcos, 2003) found differences between the Greek and American population according to the impact of religiosity on attitudes through sexual liberalism; Sahar and Karasawa (Sahar and Karasawa, 2005) found a greater influence of symbolic politics on attitudes towards abortion in the Japanese population compared to the American people. Mosley et al. (Mosley et al., 2020) conclude that attitudes towards abortion are related to each nation's socioeconomic and gender ideology. These variations are also found in the legislative expression, considering the regulatory diversity of abortion between countries or specific beliefs. For example, in Ghana and Zambia, it is believed that the woman who aborts can spread diseases, a belief that is not installed in other sociocultural realities (Shellenberg et al., 2014).

Direct violence against abortion

Finally, direct violence is expressed in treatment and concrete actions at the individual level. Kumar et al. (Kumar et al., 2009) point out that carrying the label of a woman who aborts causes her to be separated and considered part of an "other," suffering a loss of status, rejection, exclusion, and discrimination. Those with negative attitudes believe VIP is a shameful action that should be kept out secretly, a sin that deserves punishment (McMurtrie et al., 2012; Hanschmidt et al., 2016), such as infertility (Sorhaindo et al., 2014). In addition, women are deserving of rejection by men and the rest of the community (Shellenberg et al., 2014; Sorhaindo et al., 2016).

We can point to precise acts of direct violence. For example, pro-life groups organize in front of abortion clinics to dissuade women with lies and encourage women and professionals to repent (Morgan, 2017; Lowe, 2019; Lowe and Page, 2019). The literature also shows that there is direct violence on the part of some health professionals. For example, through accusatory or prejudice-based comments, threats of denunciation, moral judgments or humiliating treatment as criminals or suspects, disclosure of medical history without consent, refusal to provide relief of pain or absence of analgesics, neglect and abandonment, and lack of support and containment (Jardim and Modena, 2018; Williams et al., 2018; Makleff et al., 2019).

Studies carried out with the Chilean population confirm that people against the VIP support the punitive treatment of abortion (Pérez et al., 2020); they threaten political women who speak out in favor of abortion on social networks and question their competence (Pérez-Arredondo and Graells-Garrido, 2021). On the other hand, health professionals accept conscientious objection alleging doubts about the credibility of women and demanding more significant participation of family and partner in decision-making for the VIP (Muñoz et al., 2021; Alveal-Álamos et al., 2022), exerting humiliating treatment on migrant or racialized women who want access to legal abortion (Osorio, 2022).

The consequences of stigmatizing attitudes towards abortion

The consequences of this treatment impact women in various ways (Hanschmidt et al., 2016). Those who perceive themselves as stigmatized manifest mental health problems, such as depression, anxiety, stress, psychological distress, social withdrawal, avoidance behaviors, and somatic symptoms (American Psychological Association, 2008; O'Donnell et al., 2018; Moreno López et al., 2019). Added to this is that internalized stigma generates feelings of guilt and shame, factors that lead women to keep the practice of VIP a secret (Astbury-Ward et al., 2012; Sorhaindo et al., 2014), retract their decision (Ramos, 2016), or even expose themselves to unsafe (and illegal) methods to achieve it (McMurtrie et al., 2012; Mosley et al., 2017). The real figures on secretive abortions practiced each year are unknown in Chile. However, studies based on estimates and with indirect methodology predicted that by 2015 a total figure of close to 300,000 clandestine and unsafe abortions was reached (Dides-Castillo and Fernández, 2018).

In short, the scope of violence motivated by community attitudes towards abortion and its direct impact on women's health and internalized stigma justifies the need to learn more about these attitudes. Focusing our attention on these attitudes allows us to focus on the cause of this problem.

The measure of attitudes towards abortion

In order to know the community attitudes towards abortion, it is necessary to have instruments that have studies on their psychometric properties, which evaluate beliefs and cognitions of the community about abortion and women who have had an abortion, and under the current Chilean sociocultural scenario. In the literature, we located several instruments that could be adapted for use in Chile.

Self-report instruments exist to assess explicit attitudes towards abortion developed with populations from the USA, Australia, Ghana, Zambia, and Mexico (see Table 1). The first scales designed, the *Abortion-Attitude Scale* (Snegroff, 1976), the *Abortion Attitudes Scale* (Stets and Leik, 1993), and the *Attitudes about abortion Scale* (Hill, 2004), were created in the US with a university population. However, in other cultural realities, only the second (Snegroff, 1976; Hill, 2004) and the third (Martin et al., 2020) have been used recently. Nevertheless, both evaluate the level of agreement with abortion in a series of circumstances and not cognitions and beliefs. *Abortion-Providing Physicians Scale* (AAAPPS; Martin et al., 2020) is the fourth instrument developed in the US but to assess health professionals' attitudes towards abortion providers.

Hendriks et al. (Bahr and Marcos, 2003) developed the Adolescent Attitudes to Abortion Scale (AAA) with an Australian adolescent population. On the other hand, the *Stigmatizing Attitudes, Beliefs, and Actions Scale* (SABAS; Shellenberg et al.,

TABLE 1 Scales that have been developed to measure attitudes towards abortion.

	Instrument	Sample	Internal structure	Reliability	Evidence of validity based on the relationship with other variables
USA					
1	Abortion-Attitude Scale (Snegroff, 1976)	N = 527 students Men = 266 Women = 261	• 30 items Likert scale (5 points) One dimensional	There is no information	Attitudes toward abortion correlate significantly and positively with knowledge about abortion
2	Abortion attitudes scale (Stets and Leik, 1993)	N = 309 students	• 20 items Likert scale (5 points) Factors: (Festinger, 1964) Availability; (Galtung, 1990) Moral acceptability; (Kumar et al., 2009) Women's autonomy in the decision to abort	$\Omega_{F1} = 0.96$ $\Omega_{F2} = 0.95$ $\Omega_{F3} = 0.73$	According to the scores obtained in each factor, the pro-lifers are: (Festinger, 1964) politically conservative; (Galtung, 1990) religious; (Kumar et al., 2009) moral absolutists; and have a conservative view on (Hessini, 2014) euthanasia; (Cutler et al., 2021) prayer in schools; (Patev et al., 2019a) and birth control
3	Attitudes about Abortion Scale (Hill, 2004)	N = 63 female students Mean age = 18.86	• 10 items Likert scale (7 points) One dimensional	There is no information	There was no relationship between attitudes towards abortion and cognitive complexity
4	Attitudes About Abortion-Providing Physicians Scale (AAAPPS) (Martin et al., 2020)	N = 560 physicians; Men = 261 Women = 270 Over 25 years	• 24 items Five-point Likert-type scale Factors: (Festinger, 1964) opinion; (Galtung, 1990) motivation; and (Kumar et al., 2009) competition.	$\alpha_{F1} = 0.95$ $\alpha_{F2} = 0.81$ $\alpha_{F3} = 0.80$ $\alpha_{Total} = 0.94$	Favorable attitudes toward providers were inversely related to (Festinger, 1964) attendance at religious events; and positively with (Galtung, 1990) support for the legality of abortion; and (Kumar et al., 2009) the idea that abortion is important for women's equality. Attitudes were more favorable among abortion providers: (Hessini, 2014) with children; and (Cutler et al., 2021) who had referred a patient for an abortion
Australia					
5	Adolescent Attitudes to Abortion Scale (AAA) (Hendriks, 2012)	N = 406; Men = 203 Women = 203 Between 12 and 19 years old	• 9 items (1 only for men and 1 only for women) Likert scale (4 points) One dimensional	$PSI = 0.82$	Attitudes were more favorable among adolescents: (Festinger, 1964) older; (Galtung, 1990) women, (Kumar et al., 2009) non-Aboriginal; (Hessini, 2014) non-religious; (Cutler et al., 2021) sexually active; (Patev et al., 2019a) and with previous pregnancy experience

(Continued)

TABLE 1 (Continued)

	Instrument	Sample	Internal structure	Reliability	Evidence of validity based on the relationship with other variables
Ghana and Zambia					
6	Stigmatizing Attitudes, Beliefs, and Actions Scale (SABAS) (Shellenberg et al., 2014)	N = 531; Men = 258 Women = 273 Between 18 and 49 years old	• 18 items. Likert scale (4 points) Factors: (Festinger, 1964) Negative stereotypes; (Galtung, 1990) Discrimination/exclusion; (Kumar et al., 2009) Fear of contagion	$\alpha_{F1} = 0.85$ $\alpha_{F2} = 0.80$ $\alpha_{F3} = 0.80$ $\alpha_{Total} = 0.90$	Attitudes were more favorable among participants who support the legalization of abortion
Ghana					
7	Abortion as a Right Scale; Moral Objection to Abortion Scale (Rominski et al., 2017)	N = 1.038 students Men = 556 Women = 480	• Abortion as a Right Scale 5 items Likert scale (5 points) One dimensional Moral Objection to Abortion Scale 3 items Likert scale (5 points) One dimensional	$\alpha_{F1} = 0.76$ $\alpha_{F2} = 0.74$	Participants score highest on abortion as a Right Scale, when: (Festinger, 1964) they are over 25 years old; (Galtung, 1990) have sexual experience; (Kumar et al., 2009) have a partner; (Hessini, 2014) or know someone who has had an abortion. None of the above variables was significantly related to the Moral Objection to Abortion Scale
Mexico					
8	Scale of Attitudes towards Legal Assisted Abortion (EAALA) (García, 2012)	N = 130 students; Men = 25 Women = 105 Between 18 to 29 years old	• 19 items. Likert scale (4 points) Factors: (Festinger, 1964) Moral ambivalence; (Galtung, 1990) Pragmatic ambivalence; (Kumar et al., 2009) Anti-abortion; (Hessini, 2014) Diversity	$\alpha_{Total} = 0.60$ Data by factors are not included	Not included
9	Community Level Abortion Stigma Scale (CLASS) (Sorhaindo et al., 2016)	N = 5.600 residents; Men = 2.688 Women = 2.912 Over 25 years	• 23 items. Likert scale (4 points) Factors: (Festinger, 1964) Autonomy; (Galtung, 1990) Discrimination; (Kumar et al., 2009) Religion; (Hessini, 2014) and Secret	$\alpha_{F1} = 0.78$ $\alpha_{F2} = 0.87$ $\alpha_{F3} = 0.88$ $\alpha_{F4} = 0.82$ $\alpha_{Total} = 0.87$	They are more likely to report stigmatizing attitudes: (Festinger, 1964) older, less educated, and more religious when other observable characteristics are held constant; (Galtung, 1990) the religious; and those who do not live in the metropolitan area of Mexico City They do not influence: (Festinger, 1964) gender; (Galtung, 1990) employment status; (Kumar et al., 2009) political affiliation; (Hessini, 2014) marital status; (Cutler et al., 2021) and the number of children.

(Continued)

TABLE 1 (Continued)

	Instrument	Sample	Internal structure	Reliability	Evidence of validity based on the relationship with other variables
10	Induced Abortion Attitudes Questionnaire (CAAI) (Marván et al., 2018)	N = 764 students; Over 18 years	• 23 items. Likert scale (5 points) Factors: (Festinger, 1964) Pro-life; (Galtung, 1990) Pro-choice; and (Kumar et al., 2009) Reproductive Rights	$\alpha_{F1} = 0.91$ $\alpha_{F2} = 0.90$ $\alpha_{F3} = 0.70$	Not included

2014) and *Abortion as a Right Scale*; *Moral Objection to Abortion Scale* (Rominski et al., 2017) were developed with a community sample of Ghana and university women in Ghana and Zambia, respectively. Among these, the most used subsequently is the SABAS. For example, by Patev et al. (2019a,b) with a US population, or by (Holcombe et al., 2018) with an Ethiopian population. However, SABAS is adjusted to a sociocultural reality far removed from the Chilean one.

Finally, Mexico is the only Latin American country in which scales have been developed for the evaluation of attitudes towards abortion, a sociocultural reality closer to the Chilean one: *Scale of Attitude towards Legal Assisted Abortion* (EAALA; García, 2012) with students college students; *Abortion Stigma Scale at the Community Level* (CLASS; Sorhaindo et al., 2016), with community population; and the *Questionnaire of Attitudes towards Induced Abortion* (CAAI; Marván et al., 2018), with university students. Of these, the CLASS presents a robust study for its development and has subsequently been used in the US (Cutler et al., 2021). However, the CLASS (Pérez et al., 2022) showed no adjustment in a Chilean community sample.

Objectives and hypotheses

In Chile, there is structural, cultural, and direct violence against women who have had an abortion. Also, we have seen the potential consequences of this violence for women and the absence of an instrument about attitudes towards abortion adapted to the current Chilean sociocultural reality. Because of this, we set ourselves the general objective of this study, to design the *Community Attitudes to Abortion Scale* (CAAS) and analyze its psychometric properties in the Chilean community population. Once the construct to be measured has been delimited, a battery of items has been generated, its quality has been evaluated through expert judgment, and those items with good psychometric properties have been identified and selected, we set ourselves the following specific objectives: (Festinger, 1964) to descriptively analyze the items of the CAAS; (Galtung, 1990) demonstrate evidence of validity based on the internal structure of the CAAS; (Kumar et al., 2009) provide evidence of reliability by internal consistency of the CAAS; (Hessini, 2014) demonstrate evidence of validity of the CAAS based on the relationship with other theoretically related variables: religiosity; identification with a leftist political orientation; with a right-wing political orientation; pro-feminism, pro-LGBTIQ+, and pro-euthanasia.

As a hypothesis, we hope to obtain a parsimonious scale whose items have a high discriminative capacity (H1). In addition, considering the various constructs and dimensions of attitudes that the existing instruments in the literature have addressed, we hypothesize that this instrument will have a multidimensional structure (H2) and that it will have an internal consistency equal to or greater than 0.7 (H3). Assuming that a higher score on the scale indicates a greater presence of negative attitudes, we hypothesize that attitudes towards VIP will correlate positively with religiosity (H4a). In addition, with an effect size between intermediate and large, we expect that the participants who show less negative attitudes towards the VIP are people: with low levels of identification with a right-wing political orientation (H4b), with high levels of identification with a left-wing political orientation (H4c), pro-feminist (H4d) proLGBTIQ + (H4e) and pro-euthanasia (H4f).

Materials and methods

Design

This work is an instrumental design study (Ato et al., 2013) since it consists of the design and study of the psychometric properties of a scale. For the selection of evidence of validity and reliability and selection of statistical analyses, we consider the methodological recommendations of Abad et al. (2011).

Participants

The sample consisted of 1,223 participants with a mean age of 36.7 years (SD = 13.56), close to the country's population mean age of 35.8 years (Instituto Nacional de Estadísticas,

TABLE 2 Descriptive data of the total sample and stratified by country zone.

		Country zone			Total
		North ($n = 182$; 14.9%) n (%)	Center ($n = 735$; 60.1%) n (%)	South ($n = 306$; 25%) n (%)	
Gender	Men	109 (59.9)	362 (49.3)	148 (48.4)	619 (50.6)
	Woman	73 (40.1)	373 (50.7)	158 (51.6)	604 (49.4)
Age	From 18 to 30 years	39 (21.4)	381 (51.8)	186 (60.8)	606 (49.6)
	31 years or older	143 (78.6)	354 (48.2)	120 (39.2)	617 (50.4)
Social class	Lower	53 (29.1)	226 (30.7)	124 (40.5)	403 (33)
	Middle	48 (26.4)	275 (37.4)	87 (28.4)	410 (33.5)
	High	81 (44.5)	234 (31.8)	95 (31)	410 (33.5)
Education level	Middle or lower	43 (23.6)	169 (23)	77 (25.2)	289 (23.6)
	Technique incomplete	10 (5.5)	55 (7.5)	19 (6.2)	84 (6.9)
	Technique Complete / Univ. incomplete	41 (22.5)	216 (29.4)	89 (29.1)	346 (28.3)
	University complete or Postgraduate	88 (48.4)	295 (40.1)	121 (39.5)	504 (41.2)
Native people	Nope	133 (73.1)	581 (79)	231 (75.5)	945 (77.3)
	Mapuche	11 (6)	130 (17.7)	71 (23.2)	212 (17.3)
	Other	38 (20.9)	24 (3.3)	4 (1.3)	66 (5.4)
Marital status	Single	59 (32.4)	393 (53.5)	168 (54.9)	620 (50.7)
	Married	99 (54.4)	277 (37.7)	120 (39.2)	496 (40.6)
	Separated, Divorced, or Widowed	23 (12.6)	64 (8.7)	18 (5.9)	106 (8.7)
Zone	Rural	14 (7.7)	57 (7.8)	23 (7.5)	94 (7.7)
	urban	168 (92.3)	678 (92.2)	283 (92.5)	1,129 (92.3)

2018). We used a sampling of panelists by sociodemographic quotas. We considered the geographic macrozone (15% from the north, 60% from the center, and 25% from the south of the country) according to the density distribution—population (Instituto Nacional de Estadísticas, 2018). In addition, we seek a balanced representation in the total sample based on gender (50% men and 50% women), age (50% between 18 and 30 years, and 50% from 31 years onwards), and socioeconomic level, following indications of the classification system of the Association of Market Researchers (33.3% high level-AB, C1a and C1b-; 33% medium level-CA and C3-; and 33.3% low level-D and E -). The inclusion criteria were to be Chilean and older than 18 years old (see Table 2).

Instruments

Sociodemographic questionnaire *ad hoc*

This instrument collected information on sociodemographic aspects, such as age, gender, or educational level, and identification with social groups based on five 5-point Likert-type items, where 1 = *strongly disagree* and 5 = *strongly agree*. The five items began as follows, "I have a lot in common with the person…," and ended by pointing to different social groups: (Festinger, 1964) average left-wing political orientation; (Galtung, 1990) average right-wing political orientation; (Kumar et al., 2009) feminist average; (Hessini, 2014) average defender of LGBTIQ+ rights; (Cutler et al., 2021) average advocate of euthanasia.

Community Attitude to Abortion Scale (CAAS)

We define the theoretical construct of attitudes towards abortion as global and relatively stable evaluations of the VIP and the woman who decides to have an abortion at some point in her life, positive or negative, and at a cognitive, affective, and/or behavioral level. In addition, we elaborated an initial battery of 97 items distributed in six theoretical dimensions (The prime of your life, Positive Stereotypes, Entitlement, Negative Stereotypes, Discrimination, and Morality) through (Festinger, 1964) a review of the existing scales in the scientific literature (see Table 1). Galtung (1990) analysis of interviews used in a previous study (Pérez et al., 2020) on value arguments about the VIP with the Chilean community population; and Kumar et al. (2009) analysis of social representations about the VIP through a discussion group with 6 Chilean activists in favor of free abortion.

Next, we conducted an expert consultation with 11 professionals from areas related to the subject of study *via* email to evaluate the conceptual, linguistic, and cultural relevance of the definition of the theoretical construct, its dimensions, and the initial battery of 97 items. As a result, the description of the theoretical construct and dimensions is maintained; eight items were modified in their wording; two items were eliminated; and 14 items were incorporated. Finally, a battery of 109 items was obtained (see Annex 1).

Subsequently, we conducted a pilot study with a community sample of 118 participants to ensure an adequate understanding of the items and to identify and select those with good psychometric properties. The battery of items, a sociodemographic questionnaire, and the Informed Consent approved by the Scientific Ethics Committee (CEC) of the Universidad de La Frontera (UFRO) were computerized on the SurveyMonkey platform and disseminated through social networks and email. Of the 109 original items: we eliminated six because they did not meet the statistical criterion for corrected total item correlation greater than 0.3; according to the skewness and kurtosis criteria, we eliminated 26; and for insignificant bivariate correlations, too low or high, we eliminated 40 more. Finally, the CAAS instrument consisted of 32 items in six theoretical dimensions (see Annex 2) with five response options (from 1 = *strongly disagree* to 5 = *strongly agree*). Its psychometric properties will be exposed in the results section.

Universal Religious Involment Scale (I-E 12)

This scale, designed to measure religious involvement (Allport and Ross, 1967), was adapted by Carrasco (Carrasco, 2012) for use with Chilean university students. I-e 12 consists of 12 items, 5-point Likert-type (from 1 = *strongly disagree* to 5 = *strongly agree*), and 3 factors: (Festinger, 1964) Intrinsic Orientation (IO); (Galtung, 1990) Extrinsic Social Orientation (OES); and (Kumar et al., 2009) Personal Extrinsic Orientation (PEO). The higher the score, the greater the salience of the religious, social category compared to others, placing religion as a central value in personal identity (OI); higher social gain in terms of interpersonal relationships and status (OES); and greater personal gain, in terms of obtaining protection and consolation (PEO). This structure was adjusted in the Chilean community sample, obtaining a good/excellent internal consistency through McDonald's Omega coefficient, $\Omega_{F1} = 0.916$; $\Omega_{F2} = 0.964$; $\Omega_{F3} = 0.872$ (Pérez et al., 2022). Likewise, this structure was adjusted in the study sample, considering the correlation between the errors of items 2 and 12 ($X^2 = 437.81$; $df = 50$; $CFI = 0.98$; $TLI = 0.97$; $RMSEA = 0.08$, 90% CI [0.073, 0.087]); with positive and significant correlations ($p < 0.001$ in all cases) between the factors (F1 and F2: $\rho = 0.564$; F1 and F3: $\rho = 0.782$; F2 and F3: $\rho = 0.470$); and with excellent internal consistency ($\Omega_{F1} = 0.949$; $\Omega_{F2} = 0.974$; $\Omega_{F3} = 0.924$).

Procedure

We obtained the study sample through the NETQUEST Company under ISO 26362:2009 norm, a data provider for social and market research. Through specialized panels, it offers researchers online study samples that meet the inclusion criteria required by the research. The Informed Consent approved by the Scientific Ethics Committee of La Frontera University was used. The average response time was 21 min.

Data analysis

First, we use descriptive and frequency statistics to describe the sample. The descriptive analysis of the items (mean, standard deviation, asymmetry, and kurtosis) and the corrected item-total correlation analysis allowed us to determine the discriminative capacity of the items. We consider an indication of threat to said capacity, higher levels of +/− 2 in asymmetry, +/− 7 in kurtosis, and less than 0.3 in corrected item-total correlation (Abad et al., 2011). The Kolmogórov-Smirnov test was used to analyze the normality of the distribution of the scores. We also explore the correlation between elements using Spearman's Rho correlation to detect extreme levels. Correlations that are too high (greater than 0.8) are an indicator that the items are too similar, and one of them must be removed for redundancy. Correlations that are too low (below 0.3) indicate that one item (or several) does not measure the same construct as the rest, so removing one or more items should be evaluated.

Subsequently, as a statistical strategy to respond to specific objective 2, we carried out a process of cross-validation or replication of the factors in new samples to establish their generalizability. The sample was randomly divided into two sub-samples. First, the relevance of the data for factor analysis was established using the Bartlett index and the Kaiser-Meyer-Olkin (KMO) test in sub-sample 1. Then, we explored the factor structure of the instrument using Exploratory Factor Analysis (EFA), method extraction by unweighted least squares, and oblique rotation. Subsequently, we consider the above criteria for item selection based on corrected item-total correlation, skewness, and kurtosis. In addition, we explore the cross-loadings of the items in the factors, eliminating those with factorial weights greater than 0.3 in two factors (Fabrigar et al., 1999). We also eliminated items with non-significant correlations, below 0.3 or above 0.8, with other items of the same factor.

The resulting structure was replicated and contrasted in sub-sample 2 using Confirmatory Factor Analysis (CFA). It considers the robust unweighted least squares estimator (ULSMV) in a polychoric matrix due to the ordinal nature of the data. In addition, to know more precisely the factorial structure of the instrument, we explore whether this distribution of items by dimensions responds to different models. An oblique model, with two correlated first-order factors (Model 1), or a hierarchical model, with two first-order factors and one second-order factor (Model 2). Also, it was verified if the oblique structure was a better fit than the Exploratory Structural Equations Model (ESEM; Model 3). This structure allows cross-loading between different latent variables or items, since psychological variables have responded better to ESEM than to the assumptions. Restrictive of the CFA(Assis Gomes et al., 2017), or as a bifactor model (Model 4), an alternative to the hierarchical model that considers a general factor that explains the covariation between all the items, at the same time as specific factors or dimensions (Reise, 2012; Rodríguez et al., 2016).

To study the fit of models under analysis (Models 1, 2, 3, and 4), we used the *Root Mean Square Error of Approximation* (*RMSEA*) was considered; and the *Comparative Fit Index* (*CFI*), and the *Tucker-Lewis Index* (*TLI*). A CFI and $TLI \geq 0.95$ and $RMSEA < 0.05$ were considered a good fit; a CFI and $TLI \geq 0.90$

and an *RMSEA* < 0.08 were deemed acceptable. Schwarz's *Bayesian Information Criterion (BIC)* was also used to compare the models (a lower value indicates a better fit).

To respond to specific objective 3, we used McDonald's Omega coefficient, a relevant coefficient for use in ordinal scales (Elosua and Zumbo, 2008). Finally, to determine the evidence of the validity of the CAAS based on the relationship with other constructs (specific objective 4), we used Spearman's correlation coefficient (r_s) and the Student's t-test for mean difference with the correction of Welch when group sizes and/or variances are unequal. An intermediate effect size was considered when $d > 0.05$, and large when $d > 0.08$ (Cohen, 1998). We use the statistical packages SPSS 24 for Windows, Mplus 7, Factor 10.9, and JASP.

Results

Item analysis

In Annex 2, we collected descriptive data of the items in the study sample. The 32 items showed adequate values of asymmetry or kurtosis. In addition, they revealed a corrected item-total correlation greater than 0.3 with the total scale and the respective theoretical dimension, except for item 1, "*women should not be required to discuss the abortion decision with others*." For this reason, item 1 was removed from the scale.

In addition, item 32, "*women who choose to abort are brave for challenging the status quo*," was eliminated. It presents correlations greater than 0.8 with item 17, "*Women who choose abortion are strong for defying the traditional mandate of motherhood*," and item 25, "*a woman who aborts is a woman with the strength to go against what society expects of her*." Finally, 30 of the 32 items are maintained in subsequent analyzes (Annex 2).

Evidence of validity based on the internal structure and ítems analysis of the final scale

With sub-sample 1 ($n = 611$), and considering the 30 items that remain in the instrument, an EFA was performed. The *KMO* index = 0.96, and the Bartlett sphericity test ($\chi 2_{(435)} = 10{,}344$, $p < 0.001$) indicate that the correlation matrix is suitable for factor analysis. As a result, we obtained a multidimensional structure of two factors that explain 57.7% of the variance, fulfilling hypothesis two of the study. The first factor of 10 items was called *Autonomy*, the estimable ability of women to act against the voluntary interruption of pregnancy according to their criteria, desire, and life expectatives, regardless of the opinion or desire of others and society. The second factor, of 20 items, was labeled as *Stigma*, discrediting negative attribute manifested through stereotypes, social norms, and discriminatory behaviors directed towards women who attempt to interrupt their pregnancy or have practiced it, marking them internally or externally as inferior to the ideals archetypes of femininity or religious morality.

To obtain a parsimonious instrument, we reviewed the factorial weights and descriptive statistics of the 30 items and selected those with the best qualities for the conformation of the definitive scale. First, we observe that all the items show weights greater than 0.3 in one factor and not in the other. On the other hand, both the *Autonomy factor items* (ranging between 0.443 and 0.732) and the *Stigma factor* (ranging between 0.498 and 0.814) obtained corrected item-total correlation values greater than 0.3. Furthermore, none of the items show extreme asymmetry or kurtosis, so no item is eliminated under these criteria.

Autonomy dimension, none presented bivariate correlations higher than 0.8. However, item 3 was eliminated because it showed correlations below 0.3 with two items. The analysis of bivariate correlations for the items of the *Stigma* dimension indicates that item 26 presents high correlations with item 4 and item 10, so it is eliminated from the instrument. Items 2, 8, 20, 30, and 31 are eliminated because they present correlations with other items lower than 0.3. Of the remaining items that maintain correlations between 0.3 and 0.4 with the rest of the items, another four (Hanschmidt et al., 2016; Ministerio de Salud, 2017; Human Rights Committee, 2018; Prusaczyk and Hodson, 2018) are eliminated due to theoretical criteria (all refer to aspects related to erroneous beliefs about health and abortion). As a result, the CAAS is made up of 19 items.

A new analysis of the factorial weights of the items using AFE shows that item 5, "*I believe that girls should have the right to abort*," presents high weights in both factors (−0.322 in the *Stigma factor* and 0.579 in the *Autonomy factor*). So it is also removed. Finally, the AFE with the resulting list of 18 items (*KMO* = 0.952; Bartlett's Sphericity test significant, $\chi^2_{(153)} = 5{,}964$, $p < 0.001$) yields a structure of 2 factors that explain 52.38% of the variance. Table 3 shows the definitive scale, with the descriptive analysis of the items and factorial weights. Annex 3 includes the items of the scale in Spanish. In short, a scale of 18 items is obtained, 8 for *Autonomy* and 10 for *Stigma*. The item with which the participants show a minor agreement is 17, followed by 2 and 4. Item 12 is the one with which they show the greatest deal, followed by 15 and 14.

Next, we demonstrate the fit of the two-factor model using CFA in sub-sample 2 ($n = 612$). According to the fit indices (see Table 4), the hierarchical model (Model 2) is the one with the worst fit. The oblique model presents an adequate fit (Model 1), but the ESEM and Bifactor models (Models 3 and 4) present better and similar indicators. The correlation between *Autonomy* and *Stigma* (see Figure 1) was inverse and statistically significant ($r = -0.699$; $p < 0.001$).

Internal consistency

The McDonald's Omega coefficient value for the Autonomy factor was 0.908 in sub-sample 1 and 0.892 in sub-sample 2. For the *Stigma factor,* it was 0.941 in sub-sample 1 and 0.937 in sub-sample 2. This is indicative of excellent internal consistency.

TABLE 3 Descriptive analysis of definitive items of the CAAS in the sub-sample 1 and factorial weights.

No.	Statement item	M	SD	Skew	Kurt	CITC-F	FW
Autonomy							
05	The woman who decides to abort has self-esteem for giving herself what she wants in life	3.14	1,182	−0.163	−0.626	0.652	0.733
06	A woman has the right to abort as many times as necessary	3.00	1,442	0.011	−1,301	0.635	0.598
09	What a woman wants for her life cannot be truncated by an unwanted pregnancy	3.20	1,311	−0.213	−0.962	0.520	0.572
10	Women who choose abortion are strong for defying the traditional mandate of motherhood	2.91	1,264	0.012	−0.907	0.615	0.813
12	Forcing a woman to carry an unwanted pregnancy to term should be understood as a violation of human rights	3.46	1,358	−0.433	−0.973	0.531	0.417
14	Termination of a pregnancy is justified if necessary for a prime life	3.22	1,263	−0.205	−0.933	0.611	0.690
15	If a woman has no desire to gestate and be a mother, you do not have to do it even if you get pregnant	3.45	1,279	−0.352	−0.911	0.689	0.586
16	A woman who aborts is a woman with the strength to go against what society expects of her	2.87	1,285	0.094	−0.965	0.653	0.806
Stigma							
01	I would be disappointed if I knew that someone I love had an abortion	2.23	1,351	0.714	−0.761	0.729	0.769
02	Women should be ashamed to share their decision to abort publicly	1.89	1,146	1,093	0.220	0.674	0.644
03	Many of the women who decide on abortion were not cautious enough to avoid finding themselves in this situation	2.57	1.37	0.330	−1,136	0.657	0.620
04	A woman who aborts is a murderer	1.98	1,229	0.988	−0.135	0.806	0.758
07	Young women take abortion as a game	2.58	1,335	0.25	−1,128	0.732	0.640
08	Women who decide not to abort are blessed by God	2.01	1.20	0.838	−0.365	0.675	0.805
11	Only God can take life	2.40	1,431	0.515	−0.063	0.657	0.622
13	Women from birth have a maternal instinct	2.28	1,226	0.504	−0.822	0.493	0.681
17	Understandably, a man rejects a woman for having had an abortion in the past	1.87	1,051	0.960	0.067	0.598	0.722
18	Women who have abortions do not usually maintain stable relationships	2.21	1,137	0.438	−0.724	0.687	0.719

M = Mean; SD = Standard deviation; Skew = Skewness; Kurt = Kurtosis; CTIC-F = total item correlation corrected by factor; FW = Factor Weights.

TABLE 4 Evidence fit of the factor structures in AFC.

Models	χ^2	df	CFI	RMSEA (90% CI)	TLI	BIC
M1. Oblique: 2 correlated first-order factors	568,577	133	0.961	0.073 (0.067–0.079)	0.955	11348.404
M2. Hierarchical: 2 first order factors and a general factor	750,501	136	0.945	0.086 (0.080–0.092)	0.938	11348.404
M3. Oblique: 2 first order factors (ESEM)	263,362	118	0.974	0.063 (0.053–0.074)	0.967	5823.222
M4. Bifactor: 2 first order factors and a general factor	412,956	120	0.974	0.063 (0.057–0.070)	0.967	11348.404

x^2 = Chi Square; df = degrees of freedom; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; TLI = Tucker-Lewis Index.

Evidence of validity based on the relationship with other variables

The correlations between the dimensions of the CAAS (*Autonomy* and *Stigma*) and the dimensions of I-E 12 were statistically significant, which confirms hypothesis 4a and demonstrates concurrent validity: *Autonomy*, correlates negatively with Intrinsic Orientation ($\rho = -0.424$; $p < 0.001$), Extrinsic Social Orientation ($\rho = -0.274$; $p < 0.001$) and Personal Extrinsic Orientation ($\rho = -0.364$; $p < 0.001$); and *Stigma* correlates positively with Intrinsic Orientation ($\rho = 0.571$; $p < 0.001$), Personal Extrinsic Orientation ($\rho = 0.445$; $p < 0.001$) and Personal Extrinsic Orientation ($\rho = 0.448$; $p < 0.001$).

We contrasted the Autonomy and Stigma scores to determine discriminant validity using the extreme group comparison strategy. We used the total identification score with different social groups (left political orientation, right political orientation, pro-feminism, pro-LGBTIQ+ rights, pro-euthanasia) to create categorical variables selecting quartile 1 and quartile 4. All groups present statistically significant differences, with effect sizes between intermediate and large, as we stated in hypotheses 4b to 4e (see Table 5).

Discussion

Community attitudes towards abortion, global and relatively stable evaluations about the VIP and the woman who decides to abort manifested at a cognitive, affective, and/or behavioral level are an indicator of the potential structural, cultural and direct

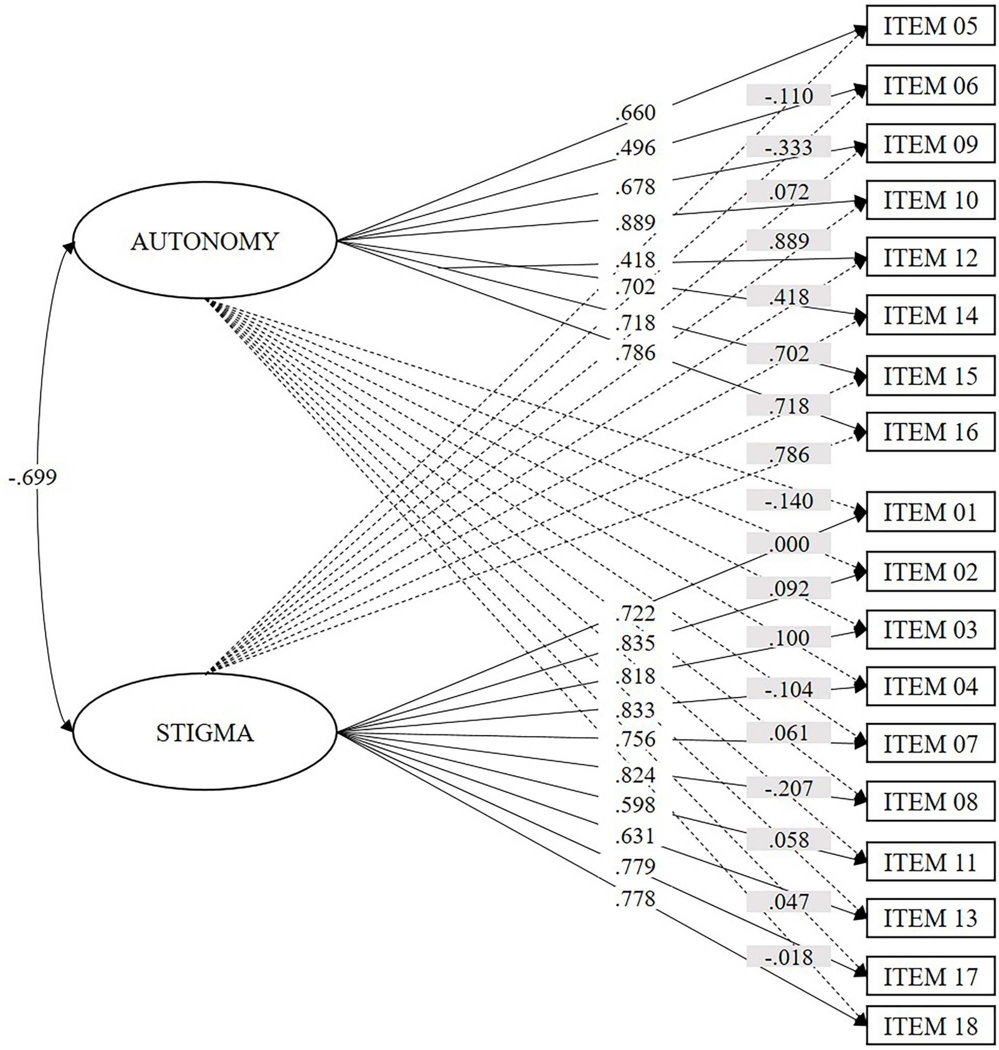

FIGURE 1
Factorial weights of the items in the ESEM model of two correlated first-order factors (Model 3). Values with a white background represent the factorial weights in the factor; values with a gray background represent the cross-loadings.

violence that society can exercise against women as a form of gender violence (Galtung, 1990; Kumar et al., 2009; Hessini, 2014). This violence affects women's mental, physical and reproductive health (American Psychological Association, 2008; Astbury-Ward et al., 2012; McMurtrie et al., 2012; Sorhaindo et al., 2014; Hanschmidt et al., 2016; Ramos, 2016; Mosley et al., 2017; Dides-Castillo and Fernández, 2018; O'Donnell et al., 2018; Moreno López et al., 2019). Therefore, it is essential to have an instrument with good psychometric properties to measure this construct.

The objective of this work was to design a scale to measure attitudes towards abortion and evaluate its psychometric properties in the Chilean community population. As a result, we obtained the CAAS. This scale comprises 18 items with discriminative capacity distributed in 2 factors: *Autonomy* and *Stigma*. CASS had an excellent internal consistency for both factors and maintained the expected relationships with other constructs, demonstrating evidence of concurrent and discriminant validity.

The items that generated the greatest agreement among the participants are part of the *Autonomy dimension*. One of them identifies the prohibition of abortion as a violation of human rights, and the other two refer to respect for the decision of the woman who decides to abort when being a mother is not part of her life plans. The items that generated less agreement belong to the *Stigma* dimension. One of them includes the most severe stereotype among those evaluated, "*a woman who aborts is a murderer*," and the other two refer to the justification of discriminatory behavior: "*women should be ashamed to share their decision to abort publicly*," and "*understandably, a man rejects a woman for having had an abortion in the past*." This result indicates a trend towards greater acceptance of abortion in the study sample, consistent with recent legislative developments

TABLE 5 Comparison between extreme groups in their scores in the dimensions of the CAAS.

Group/ Quartile	n	Min.	Max.	M	SD	T	df	p	d
Autonomy									
Low left	317	1	5	2,818	1,010	−10.732*	626.06	<0.001	0.84
High left	327	1	5	3,623	0.888				
Low right	450	1	5	3,466	0.953	10.665*	933.83	<0.001	0.67
High right	562	1	5	2,840	0.894				
Low feminist	537	1	5	2,808	0.840	−11.543*	1,202	<0.001	0.66
High feminist	686	1	5	3,399	0.947				
Low LGBTIQ+	610	1	5	2,775	0.859	−14.541*	1219.76	<0.001	0.83
High LGBTIQ+	613	1	5	3,502	0.891				
Low euthanasia	499	1	5	2,678	0.825	−15.445*	1,221	<0.001	0.90
High euthanasia	724	1	5	3,457	0.895				
Stigma									
Low left	317	1	5	2.44	0.998	10.435*	594.30	<0.001	0.82
High left	327	1	4.60	1.71	0.771				
Low right	450	1	4.40	1.74	0.793	−15.591*	1006.05	<0.001	0.97
High right	562	1	5	2.59	0.931				
Low feminist	537	1	5	2.56	0.908	12.136*	1132.32	<0.001	0.70
High feminist	686	1	4.70	1.93	0.877				
Low LGBTIQ+	610	1	5	2.63	0.888	17.510	1205.45	<0.001	1.00
High LGBTIQ+	613	1	4.60	1.78	0.797				
Low euthanasia	499	1	5	2.69	0.888	16.219*	1022.80	<0.001	0.95
High euthanasia	724	1	4.60	1.87	0.830				

M = Mean; SD = Standard Desviation; df = degrees of freedom; * = Welch's T test was used.

in the country: approval levels for free abortion in Chile have been rising recently, from 29% in 2018 to 41% in 2021 (Institut de Publique Sondage d'Opinion Secteur, 2018; Institut de Publique Sondage d'Opinion Secteur, 2020).

As we hypothesized, the CAAS obtained a multidimensional structure. This structure comprises two first-order factors correlated inversely, although it did not coincide with the theoretical structure initially proposed. Items from the theoretical dimensions of plenitude, positive stereotypes, and rights were grouped in the *Autonomy* dimension. In contrast, items from the negative stereotypes, discrimination, and morality dimensions were grouped in the *Stigma* dimension. According to hypothesis three, both factors showed excellent internal consistency. This magnitude is similar to or higher than that reported in most reviewed scales (between 0.60 and 0.96). Among the evaluated models, the ESEM model and the bifactor model showed a better and similar fit. We prefer the ESEM model over the bifactor model because it is the most parsimonious solution and because the factors represent correlated but differentiated constructs from a theoretical perspective. In addition, this model better represents the real behavior of psychological constructs since it allows the indicators to maintain cross-loads with other factors (Assis Gomes et al., 2017). On the other hand, the adequate adjustment of the bifactor model and the level of correlation between the factors (−0.699) could justify using a global score while considering a factor score (Reise, 2012; Rodríguez et al., 2016). However, we do not have theoretical evidence to support the existence of a general factor.

The *Autonomy* construct refers to the level of agreement with the woman's independence to make decisions about abortion; and the questioning of cultural beliefs about gender that impose motherhood and care over the woman's will and her plans for life (Bègue, 2001; Kumar et al., 2009; Vitti and Cabello, 2010; Norris et al., 2011; Clements, 2014; Adesse et al., 2016; Prusaczyk and Hodson, 2018). The paternalistic and infantilizing attitudes of the patriarchal system nourish the agreement with the suppression of women's autonomy (Lagarde, 1994; Osorio, 2022). The woman is seen as a delicate being who needs protection and support, and the woman who decides to have an abortion is seen as unintelligent, inferior, and untrustworthy (Shellenberg et al., 2014; Adesse et al., 2016; Sorhaindo et al., 2016). The previous justifies questioning women's autonomy to make decisions about their reproductive health (Osborne et al., 2022) in favor of others. For example, community members and health professionals support limiting women's decision-making capacity in favor of their family and partner (Patel and Johns, 2009; Jozkowski et al., 2018; Alveal-Álamos et al., 2022). Even the woman's difficulty deciding on her reproductive health is identified as a control tool in abusive relationships (de Las Martin Heras et al., 2015). The *Autonomy* dimension is represented in other scales, such as the *Abortion Attitudes Scale* (Stets and Leik, 1993), the *Abortion as a Right*

Scale (Rominski et al., 2017), the *CLASS* (Sorhaindo et al., 2016), *and the CAAI* (Marván et al., 2018), which accounts for the concern for this construct in other cultural realities.

Stigma dimension collects the community's agreement with stereotypes and social norms about femininity and morality that mark women who abort as inferior and justify discriminatory treatment (McMurtrie et al., 2012; Shellenberg et al., 2014; Sorhaindo et al., 2014; Adesse et al., 2016; Hanschmidt et al., 2016; Sorhaindo et al., 2016). This factor is represented in scales such as the *Abortion attitudes scale* (Stets and Leik, 1993), the *SABAS* (Shellenberg et al., 2014), the *CLASS* (Sorhaindo et al., 2016), or the *AAAPPS* (Martin et al., 2020). Thus, are measured in this factor: stereotyped ideas such as the woman who aborts are not very cautious, a murderer, promiscuous, and libertine (Shellenberg et al., 2014; Adesse et al., 2016; Sorhaindo et al., 2016; Pérez et al., 2020); discriminatory beliefs such as that abortion is a shameful action that should be carried out in secret (McMurtrie et al., 2012; Hanschmidt et al., 2016); and conservative ideas, such as that the woman who decides not to have an abortion is morally superior in the eyes of God, that life must be respected from conception (Piazza, 2012; Pfeffer, 2017; Sorhaindo et al., 2016), or that motherhood is an instinct (Lagarde, 1994; Kumar et al., 2009; Osorio, 2022). This factor may be especially relevant to work on preventing direct violence against women since, as we said before, groups and individuals under these stereotypes and beliefs exercise violence through threats, deception, discriminatory treatment, and disqualification (Morgan, 2017; Jardim and Modena, 2018; Williams et al., 2018; Lowe, 2019; Lowe and Page, 2019; Makleff et al., 2019; Pérez-Arredondo and Graells-Garrido, 2021).

The literature identifies religion and conservative political orientation as the most relevant correlates of attitudes towards abortion (Patev et al., 2019a,b; Pérez et al., 2020; Cutler et al., 2021; Osborne et al., 2022; Pérez et al., 2022). As hypothesized, our results support this premise since a higher score in Intrinsic Orientation (IO), Extrinsic Social Orientation (ESO), and Personal Extrinsic Orientation (PEO) correlates negatively with *Autonomy* and positively with *Stigma* (H4a), with the strongest correlation being with OI in both cases. These results imply that the participants that obtain social and personal gain from identifying themselves as religious (ESO and PEO), and above all, for whom religious identity prevails over other social identities to regulate and guide their behavior (IO; Allport and Ross, 1967), accept women's autonomy to decide on abortion to a lesser extent and are more in agreement with stereotypes and stigmatizing beliefs about women who abort, and with discriminatory behavior towards them. This result is evidence of concurrent validity. In addition, the groups of participants with low levels of identification with a left-wing political orientation (H4b), and high levels of identification with a right-wing political orientation (H4c), obtain a lower mean score in *Autonomy* and a higher mean score in *Stigma*. These are evidence of the discriminant validity of the scale. These results make sense that both groups take the same values and beliefs about gender and the beginning of the life we have reviewed, as a guide to define morally acceptable behavior (Kumar et al., 2009; Piazza, 2012; Clements, 2014; Sorhaindo et al., 2014; Hanschmidt et al., 2016; Pfeffer, 2017; Pérez et al., 2020, 2022). Consequently, religious and politically conservative people question women's autonomy and evaluate them as inferior to the ideals of femininity and morality when they transgress these social norms, these groups being the historical promoters of laws that limit access to abortion, also in Chile (Dides-Castillo and Fernández, 2018; Elgueta et al., 2019; Maira et al., 2019; Osorio, 2022).

Finally, and as further evidence of the discriminant validity of the scale, the groups of participants with low levels of identification with the average feminist person (H4d), LGBTIQ+ rights defender (H4e), and euthanasia (H4f), obtain lower average scores on *Autonomy*, and higher in *Stigma*. This result is empirical evidence that supports the idea formulated by the Bellagio group: whoever questions the right to abortion also questions other doctrines, rights, or individual freedoms (Hessini, 2014). What has been said is consistent with the rest of the results to the extent that, like the VIP, feminism and the LGBTIQ+ community threaten the traditional gender order that establishes socially accepted behavior for women and non-binary people (Lagarde, 1994; Janssen and Scheepers, 2019; Hernandez, 2021). At the same time, the acceptance of euthanasia, in the same way as abortion, means the violation of the norm of religious morality on respect for life from conception to natural death (Stets and Leik, 1993; Pfeffer, 2017; Francis et al., 2019).

We must consider some aspects, like limitations of the study, that may affect the scope of the results. In the first place, although the study sample is balanced according to gender, age, and socioeconomic level, this balance is not representative of the population distribution in Chile (Instituto Nacional de Estadísticas, 2018). In addition, the sample has been collected through an online panel, which translates into a bias: there are mostly participants with Internet access and good command of new technologies. On the other hand, the CAAS is a measure of self-reported explicit attitudes, which may be affected by social desirability, considering that abortion is a controversial issue. Finally, it should be noted that this study offers psychometric evidence for its use in the Chilean population, but it is necessary to accumulate more evidence to guarantee its use, such as, for example, its predictive validity on support for abortion access policies or direct violent behavior. In addition, the evidence of validity accumulated in this study on the relationship of the scale with other variables is based on single-item measurements. Exploring other validity evidence in future research and its applicability in specific populations, such as health professionals, is recommended. Due to their direct dealings with women who request VIP, health professionals are in a privileged position to exercise violence (Jardim and Modena, 2018; Williams et al., 2018; Makleff et al., 2019). In addition, as another future line of research, we propose to explore implicit measures and within-subject designs to assess attitudes toward abortion since they have been shown to reflect a greater extent the personal attitudes of the individual (Sakaluk and Milhausen, 2012) than the explicit attitudes.

In conclusion, this work provides the first scale that evaluates attitudes towards abortion in Chile. The CAAS is an adequate tool for use with the Chilean community population, with evidence of validity in its internal structure, concurrent and discriminant validity, and excellent internal consistency. Our results indicate that this scale presents two correlated but differentiated factors, *Autonomy,* and *Stigma*, with religious participants and those with a conservative political orientation who question women's autonomy to a greater extent and are more in agreement with the stigmatization of abortion. In addition, those who have a restrictive view of abortion do not identify as pro-feminists, pro-LGBTIQ+, or pro-euthanasia. Based on the results, we recommend using this instrument to understand the population's attitudes in the country, identify individuals with greater potential to exercise direct violence, and contribute to developing intervention and prevention programs.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, for readers who request it.

Ethics statement

The studies involving human participants were reviewed and approved by Comité Ético Científico de la Universidad de La Frontera. The patients/participants provided their written informed consent to participate in this study.

Author contributions

BP, JJB and FR: conceptualization. BP and AC-S: methodology. BP, JJB, CA-A, and LJ: fieldwork. BP, JJB, and AC-S: formal analysis. BP and JJB: writing—original draft preparation. BP, AC-S, CA-A, and FR: writing—review and editing. BP: project administration. FR: Formulation of research proposal and initial manuscript, international development of the line and revision of the manuscript. All authors contributed to the article and approved the submitted version.

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Conflict of interest

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

Publisher's note

Supplementary material

The Supplementary material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.1008492 z/full#supplementary-material

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The impact of stigma on mental health and quality of life of infertile women: A systematic review

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Introduction: The stigma of not giving birth to children affects approximately 53. 08~64% of female infertility patients worldwide. This stigma not only causes harm to the mental health of these infertility patients, but also affects their quality of life, making them bear the adverse social consequences such as domestic violence, marriage breakdown, or even delay in receiving the treatment. Therefore, it is crucial to have a deep understanding of the patients' stigma and effective intervention in alleviating it.

Aims/Question: This study aims to discuss and summarize the stigma in infertile women and its impact on patients, and to provide a theoretical basis for the clinical treatment and nursing intervention of disease stigma in infertile female patients.

Methods: The literature search used four English databases (Cochrane Library, EMBASE, Web of Science, and PubMed) and two Chinese databases (CNKI and Wanfang). The search time of the literature ranges from the establishment of the library to 2022, with no language restriction.

Results: The review included 28 studies, with 20 cross-sectional studies and 8 qualitative studies. This study found that social support, living environment, education level, occupation, and fertility awareness were the major influencing factors of infertility stigma.

Conclusions: Infertility stigma can bring heavy mental pressure and psychological burden to female infertility patients and affect their quality of life. Therefore, effective and targeted psychological interventions should be developed to reduce the patients' stigma and improve their quality of life.

Implications for practice: Healthcare workers must develop targeted nursing interventions, provide professional counseling services to reduce the level of stigma in female infertility patients, alleviate fertility stress, and improve their quality of life.

KEYWORDS

mental health, infertility, stigma, quality of life, review

1. Introduction

Infertility refers to a situation in which both the husband and the wife want to have children, have a normal sexual life, and have not used contraception for more than a year but still cannot conceive (Zegers-Hochschild et al., 2017). Due to the influence of adverse factors such as environmental pollution, work pressure, and changes in living habits, the number of infertility patients increases annually (Fu et al., 2015).

Infertility has become a major public health concern worldwide (Tsevat et al., 2017). According to the WHO statistics, infertility has become the third major disease in the twenty-first century, after tumors, cardiovascular, and cerebrovascular diseases, threatening human health (Mascarenhas et al., 2013). Studies have shown that the proportion of infertile women is between 3.5 and 16.7% in developed countries and between 6.9 and 9.3% in developing countries. About 72∼80 million women of childbearing age worldwide currently have infertility (Khakbazan et al., 2020).

Although the male-female ratio of infertility patients has increased recently, the female infertility patients seem to be more psychologically stressed and bear the brunt of more severe social consequences in the face of infertility. Studies have revealed that both seeking and not seeking treatments can lead to an emotional distress in infertile women (McQuillan et al., 2003). In traditional cultural societies, not having children is often considered a woman's fault (Tiu et al., 2018). Infertile women are often observed as worthless or alien (Fledderjohann, 2012; Zhang et al., 2021). Some unreasonable social cognition and prejudice make many infertile women suffer different forms of discrimination in their lives and bear the social consequences such as violence from family, marriage breakdown, or malicious evaluation from surrounding people (Batool and de Visser, 2014; Dag et al., 2014; Kaya and Oskay, 2020). In Turkey, childless women are observed as "trees of no fruit" (Koçyigit, 2012). A similar phenomenon has occurred in Jordan, where infertile women are described as "The wings are broken," "dead wood," and "half male and half female" (Daibes et al., 2018). In this social environment, female infertility patients are highly susceptible to the stigmatization of the disease (Yilmaz and Kavak, 2019). The concept of stigma was first introduced by the American sociologist (Goffman, 2009), defining it as "an indecent social mark." When some people are given this label, they are often treated with contempt by ordinary people (Goffman, 1963). It can also lead to humiliation and discrimination for infertile women suffering from identity stigma because they believe they cannot meet social expectations, resulting in painful conditions such as anxiety and depression (Davern and O'Donnell, 2018). Recently, it has been studied primarily in patients with cancer or stroke (Fujisawa and Hagiwara, 2015; Zhu et al., 2019). However, there is no uniform definition of stigma in infertility patients. Rie Yokota, a Japan scholar, stated that after being diagnosed with infertility, the female infertility patients suffer from feelings of guilt, shame, and self-depreciation due to fear of rejection and social and family humiliation, which lead to negative emotions, rigid marital relationships, and decreased quality of life, affecting the normal life of patients (Yokota et al., 2022).

The stigma of the disease negatively affects the female infertility patient's body and mind (Ying et al., 2015; Freeman et al., 2018). In addition, this stigma can severely affect the patient's social skills, segregating the patient from some positive social interactions (Cousineau and Domar, 2007; Slade et al., 2007). Due to the stigma of the disease, some patients are even unwilling to contact the members of the society at large, shut themselves up, produce more severe anxiety and depression-related symptoms, or delay medical treatment, thereby aggravating or impeding infertility treatment (Miles et al., 2009; Schwerdtfeger and Shreffler, 2009; Öztürk R. et al., 2021).

The stigmatization of the disease has such a tremendous negative impact on the patient's body and mind, and the quality of daily life also declines. This review aims to investigate whether disease stigma affects the mental health and the quality of life of women experiencing fertility difficulties and provide a reasonable method for the medical staff to develop effective interventions in the future, reduce patient stigma, reduce the patient psychological burden, and improve the quality of life.

2. Review

2.1. Objective

This retrospective article aims to summarize the impact of stigma on infertile women's mental health and quality of life to provide supporting evidence. Possible countermeasures were explored to develop appropriate interventions for patients in the future.

2.2. Methods

2.2.1. Design

This systematic review selects articles for inclusion based on the System Review and Meta-Analysis Preferred Reporting Project (PRISMA) guidelines (Page et al., 2021; Supplementary material). The Strengthening the Reporting of Observational Studies in Epidemiology guidelines (Von Elm et al., 2007) were used to assess the quality of articles. The quality of all qualitative studies was assessed using Evidence-Based Care Guidelines tool.

2.2.1. Literature search

We conducted a comprehensive literature search without language restrictions using the databases of the Cochrane Library, EMBASE, Web of Science, PubMed, Wanfang data, and CNKI from their establishment until July 2022. Computer searches used Medical Subject Headings and keywords, including "infertility," "subfertility," "barrenness," "sterility," "reproductive sterility," "stigma," "social stigma," "perceived stigma," "shame," "discriminate," "psychological," "psychological stress," "mental health," and "quality of life." Preliminary screening is carried out by the thesis title and abstract. In addition, relevant citations from the included studies were searched by hand.

2.3. Criteria for inclusion and exclusion in the literature

Inclusion criteria: (a) These studies must have been published, and the research methodology should be a cross-sectional study associated with female infertility stigma; (b) the subjects were infertile women; (d) the outcome measures included the association between stigma and mental health, or between stigma and quality of life. (c) There is no restriction on the language and year of publication of the literature.

Exclusion criteria: (a) Literature that does not match the content of this article. (b) The literature data are incomplete, and complete information cannot be obtained after contacting the author. (c) Meta, systematic reviews, and reviews of the literature. (d) The quality evaluation is low in the literature.

2.4. Extraction of data

Two researchers independently conducted literature screening, data extraction, and cross-checking. If there was any disagreement, it was passed after resolving through a third-party negotiation. First, the researchers screened the literature by reading the title of the paper in order to exclude literature that was obviously not relevant to the study. They then read the abstract and full text to determine whether the study was included or not. The extracted content included: title, author, publication time, country of publication, research type, research content, and research results.

2.5. Quality appraisal

The quality of articles was evaluated independently by two reviewers using Strengthening the Reporting of Observational Studies in Epidemiology guidelines (STROBE) (University of Bern, 2009). In case of disagreement, a third researcher was invited to participate in the discussion to reach a consensus. This guide has 22 items with a total score of 22 points. Each item received one point if it met the criteria. If the description was insufficient or nonexistent, it received a score of zero. A score of ≥ 17 counts as a high-quality article. A score between 11 and 16 counts as a medium-quality article. A score of ≥ 10 counts as a low-quality article.

The 20 studies included in this study were assessed for quality, and so no low-quality articles were found. Concurrently, 10 items are high-quality articles. In addition, there are 10 out of 20 medium-quality articles. The details can be found in Table 1.

The reviewers assessed the quality of these eight qualitative studies using evidence-based care guidelines (Russell and Gregory, 2003). Scoring scales ≥ 5 are classified as high-quality studies, and scoring scales ≤ 4 are classified as low-quality studies. After evaluation, 8 out of 8 studies were identified as high-quality studies. The scores are given in Table 1.

In qualitative studies, the research questions are accurate and true, the methods adopted are consistent with the purpose of the research, and the collected data were complete. The phenomena studied can be clearly described, and the results obtained were logical. However, one study did not mention the previous fertility of residents (Nieuwenhuis et al., 2009).

3. Results

3.1. Characteristics of the included literature

This review includes 28 studies, with 20 cross-sectional and 8 qualitative studies (Figure 1). All studies were published in peer-reviewed journals. The article included different populations from 13 countries with 8,193 participants. The four studies were conducted in Europe (Portugal, United Kingdom), eight in the Middle East (Iran, Turkey, and Jordan), ten in East Asia (China and Japan), five in Africa (Ghana, Nigeria, and South Africa), and three in North America (United States of America).

This paper includes 28 studies, mainly discussing the current disease stigma in infertile women, the impact of stigma on patients' mental health and quality of life, and clinical interventions for stigma. In the cross-sectional studies, 17 studies focused on the psychological condition of infertile women and 3 on the quality of life of infertile women. All qualitative studies focused on the psychological problems of infertile patients, and two also focused on patients' quality of life.

The results of the review are presented in three tables: the effects of the disease stigma on the mental health of females with infertility (Table 2), quality of life (Table 3), and a summary of the qualitative studies (Table 4).

3.2. Stigma in female patients with infertility

Studies have revealed that infertile women worldwide are stigmatized for infertility (Whiteford and Gonzalez, 1995; Jansen and Saint Onge, 2015; Anokye et al., 2017; Zhang et al., 2021).

TABLE 1 Variables assessed and methodological quality of the studies included in the review.

References	Mental health	Quality of life	The quality of the evidence	Total
Dyer et al. (2002)	■		High	8
Slade et al. (2007)	■		High	18
Donkor and Sandall (2007)	■		Moderate	15
Nieuwenhuis et al. (2009)	■		High	7
Galhardo et al. (2011)	■		Moderate	15
Nahar and Richters (2011)	■		High	9
Fledderjohann (2012)	■		High	9
Galhardo et al. (2013)	■		Moderate	15
Tabong and Adongo (2013)	■		High	8
Galhardo et al. (2014)	■		High	18
Li et al. (2017)	■		High	19
Daibes et al. (2018)	■		High	9
Yilmaz and Kavak (2019)	■		Moderate	15
Roberts et al. (2020)	■		High	17
Kaya and Oskay (2020)	■		High	17
Van Rooij et al. (2020)		■	Moderate	16
Ofosu-Budu and Hanninen (2020)	■		High	9
Ozturk A. et al. (2021)	■		High	17
Öztürk R. et al. (2021)	■		Moderate	16
Lin et al. (2021)	■		Moderate	15
Fang et al. (2021)	■		Moderate	14
Jing et al. (2021)		■	High	18
Zhang et al. (2021)	■		Moderate	15
Taebi et al. (2021)	■		High	9
Küçükkaya and Kiliç (2022)	■		Moderate	15
Yokota et al. (2022)	■		High	18
Jing et al. (2022)		■	High	17
Zhao et al. (2022)	■		High	17

Note: ■ represents the outcome variables of the study.

Although infertile women in different countries and regions may differ in stigma due to cultural, religious, ideological, economic, and other differences (Karaca and Unsal, 2015), there is no doubt that all infertile women with stigma have poor mental health and quality of daily life (Brown, 2022; Yokota et al., 2022).

Social support is essential and is significantly associated with stress levels in infertile women (Gibson, 2000; Martins et al., 2011). Family and partners are important for infertile women to seek outside help. However, the social stigma and personal shame of infertility force infertile women to conceal their condition, preferring to keep their infertility a secret rather than communicate with family or friends. They can use self-isolation to reduce the effects and injuries caused by the surrounding environment (Whiteford and Gonzalez, 1995; Ramazan et al., 2009; Karaca and Unsal, 2015). In a study of 21 infertile women, the patients highlighted their difficulties with friends who had children and found that they experienced social withdrawal at family and friend gatherings because they felt marginalized (Pedro, 2015). In another study, the authors found that infertile women deliberately avoided topics related to family or children to avoid sad or uncomfortable conversations (Remennick, 2000). These negative social interactions may reduce infertile women's perception of social support, further increase patients'

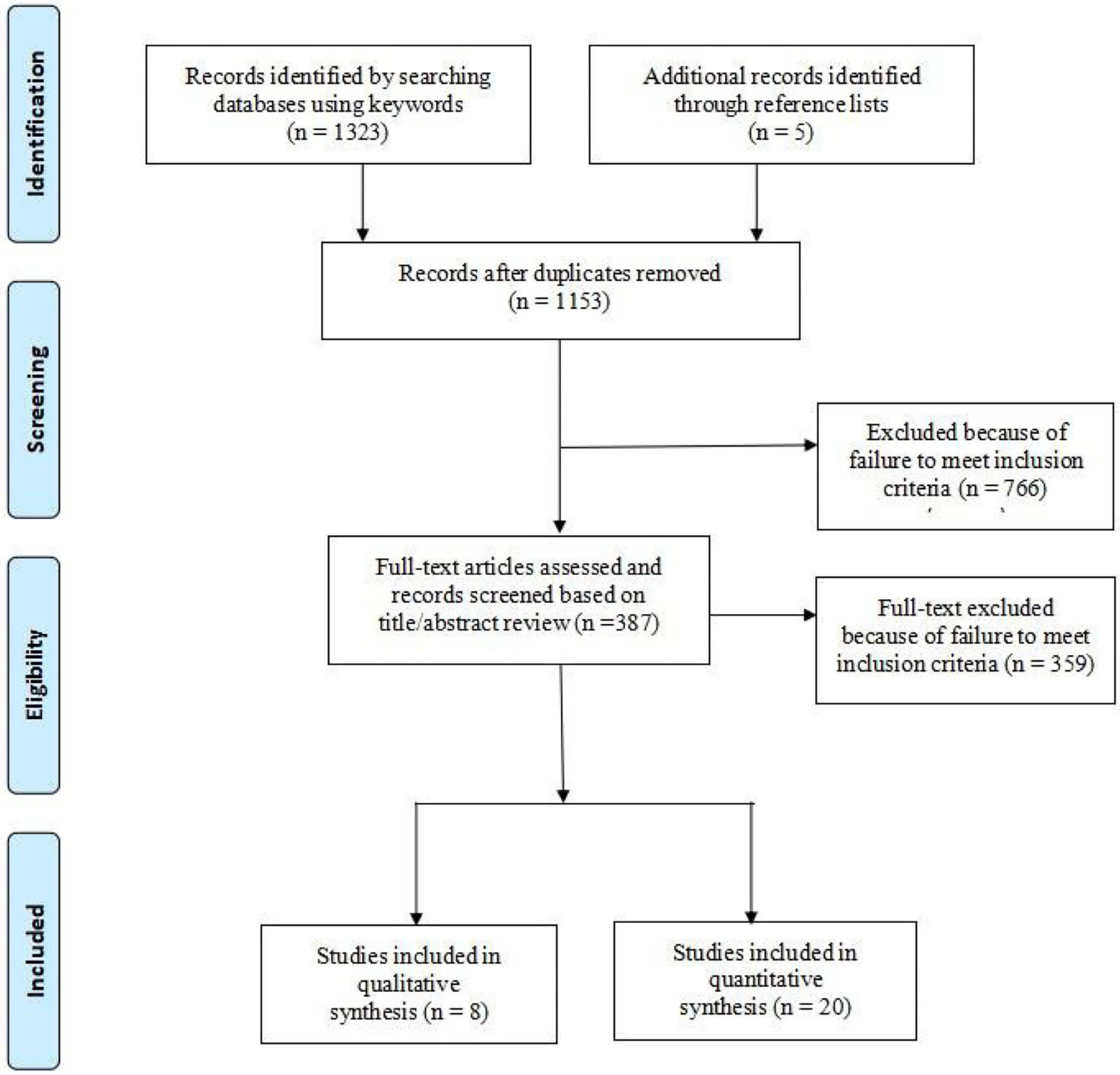

FIGURE 1
PRISMA flow diagram.

stigma, threaten their mental health, and exacerbate anxiety and depression.

In addition to social support, living environment, education level, occupation, and fertility awareness can also impact patients' stigma. The living environment in which infertile women live can impact their stigma. Compared to developed countries, women who live in traditional societies or accept traditional cultural beliefs believe that infertility places the most significant burden, stigma, and suffering (Greil et al., 2010; Ying et al., 2015). This may be because, in countries with sociocultural and traditional notions, the status of being a mother is important for a woman, and failure to take on this responsibility can be socially ostracized and humiliated (Jansen and Saint Onge, 2015). This makes many female infertility patients more eager to get pregnant and more sensitive to words such as "pregnancy" and "child," which increase their fertility pressure (Zhang et al., 2021). In addition to sociocultural factors in different countries leading to female stigma, different regions in each country produce different levels of stigma. Studies have indicated that infertile women with rural lifestyles are more discriminated against than infertile women with urban lifestyles (Donkor and Sandall, 2007; Li et al., 2017; Yilmaz and Kavak, 2019; Ozturk A. et al., 2021). Traditional culture is often more prevalent in rural areas, and because of the rapid spread of information, infertile women are more vulnerable to social isolation and neglect (Koçyigit, 2012). The family environment can also increase the stigma among infertile women. Two studies have found that living with parents may increase women's anxiety and make them more pressurized to have children (Li et al., 2017; Yokota et al., 2022).

Some studies have found that stigma is associated with educational level (Donkor and Sandall, 2007; Lin et al., 2021; Ozturk A. et al., 2021; Zhang et al., 2021; Küçükkaya and Kiliç, 2022; Zhao et al., 2022). Patients with higher education levels have lower stigma than those with lower education levels, and patients with lower education levels are more likely to fall into an inferiority complex, leading to more severe stigma (Donkor and Sandall, 2007; Alhassan et al., 2014). This may be because highly educated women have more opportunities and abilities to learn about diseases. This helps them have access to real-time, effective treatment and the ability to overcome discrimination and infertility-related stigma in a positive manner (Alhassan et al., 2014; Jing et al., 2021).

Occupation is also an important factor in the perception of stigma (Donkor and Sandall, 2007; Lin et al., 2021; Ozturk A. et al., 2021; Zhang et al., 2021; Küçükkaya and Kiliç, 2022; Zhao et al., 2022). On the one hand, occupation may be related to income level. One study observed that the psychological distress of infertile women whose income was lower than their expenditure was more severe (Küçükkaya and Kiliç, 2022). Other studies have also shown that the cost of treatment can carry tremendous psychological stress on infertile patients (McQuillan et al., 2003; Ozkan and Baysal, 2006). Conversely, women with higher incomes experience a smaller psychological burden. They can devote their energy to work and career, distract themselves from the disease, and at the same time, learn some psychological skills to strengthen their psychological strength (Zhang et al., 2021). On the other hand, it may be related to whether the infertile woman is working or not. Women with fixed jobs and incomes can earn a sense of accomplishment through work and also have a stable source of income, ensuring their daily quality of life, and their guilt and sensitivity to diseases will be relatively low compared to unemployed women (Alhassan et al., 2014; Jing et al., 2021). Homemakers cannot obtain information about infertility and its consequences because they have little communication with the outside world. The work creates an environment for infertile women to help cope with infertility and support women, so that they can express their ideas and discuss and communicate with colleagues, relieving pressure on infertile patients to a certain extent (Nahar and van der Geest, 2014; Verma and Baniya, 2016).

An Iranian study revealed that the higher the level of irrational reproductive cognition, the higher the depression (Farzadi and Ghasemzadeh, 2008). This may be because infertile patients with a high level of irrational fertility cognition will have a strong willingness to have children, and when the willingness to have children cannot be realized, the patient will think that she is not a complete woman, resulting in self-deprecating cognition, triggering the sense of stigma (Fekkes et al., 2003; Farzadi and Ghasemzadeh, 2008).

3.3. Effects of the stigma on mental health female in infertile women

Because of fertility defects, infertile women suffer a double whammy from themselves and the outside world (Keramat et al., 2013; Yeshua-Katz, 2018). First, it makes patients very prone to stigma, and the stigma increases the psychological burden of patients, causing them to fall into negative emotions such as pain, inferiority, anxiety, depression, etc., which seriously affects the patient's physical and mental health and the treatment of diseases (Yagmur and Oltuluoglu, 2012; Li et al., 2017; Yilmaz and Kavak, 2019). Infertility patients from different cultural backgrounds are constantly faced with various unavoidable problems, which can cause significant psychological damage (Slade et al., 2007; Kaya and Oskay, 2020; Yokota et al., 2022). In this review, 17 out of 28 studies explored the impact of stigma on infertile women's mental health. Among these, 15 out of 28 studies found that stigma was significantly positively correlated with anxiety and depression, and the negative psychological emotions of infertile patients would increase with the stigma caused by infertility (Li et al., 2017). The remaining two studies focused on patients' feelings of hopelessness and sadness. One study of infertile women in Turkey found that female infertile patients felt hopelessness, which increased with the stigma (Kaya and Oskay, 2020). Another study from China compared their data with those of other infertility studies in China and found that women who had difficulty getting pregnant reported higher levels of sadness than healthy women (Zhao et al., 2022).

According to the literature, some couples view infertility as the enemy of life (Yari et al., 2019; Alamin et al., 2020). Furthermore, a study found that after 12 months of treatment, the suffering of both unpregnant men and women in the social sphere increased (Schmidt et al., 2005). In this review, three studies compared infertility couples and found that women scored higher on stress, anxiety, and depression than men (Slade et al., 2007; Kaya and Oskay, 2020; Fang et al., 2021). In other words, women face a higher psychological stress in the face of infertility and are more likely to suffer stigma because of fertility difficulties. This could be because cultural factors and gender roles make women more likely than men to feel ashamed and negatively self-critical (Galhardo et al., 2011; Kaya and Oskay, 2020).

In addition to directly causing the psychological distress associated with infertility, stigma can lead to reduced social support for infertility patients, further increasing their distress.

TABLE 2 **Summary of the effects of disease stigma on mental health in female patients with infertility.**

References	Design	Sample size	Instruments	Important findings
Slade et al. (2007) (UK)	Cross-sectional	87 Women with infertility, 64 men with infertility	SCQ, FPI, HADS	Infertile women perceive a higher sense of stigma compared to men. Stigma is directly associated with general suffering.
Donkor and Sandall (2007) (Ghana)	Cross-sectional	615 infertile women	PSS, FPI	Higher levels of perceived stigma were associated with increased infertility-related stress.
Galhardo et al. (2011) (Portugal)	Cross-sectional	100 fertile group (FG) couples; 100 infertile group (IG) couples; 100 Adoption group (AG) couples	OAS, ESS, BDI, STAI-Y	In infertile couples, wives tend to show higher levels of depression, self-judgment, and external shame can play a predictive role.
Galhardo et al. (2013) (Portugal)	Cross-sectional	309 patients (162 women and 147 men)	OAS, ESS, BDI	External stigma can be a direct predictor of infertility-related stress.
Galhardo et al. (2014) (Portugal)	Cross-sectional	162 infertile women	ESS, FPI, BDI	Stress and depression caused by external shame are directly linked.
Li et al. (2017) (China)	Cross-sectional	211 infertile women	Disease-related information questionnaire, SDS	Infertile women in China will have a sense of shame because of discrimination from the outside world, resulting in depression.
Yilmaz and Kavak (2019) (Turkey)	Cross-sectional	121 infertile women	ISS, BDI	A significantly positive correlation was found between stigma and depression as the level of stigma increased, depression increased.
Roberts et al. (2020) (USA)	Cross-sectional	74 infertile women	ISS, HSCL-10	The stigma of infertility can cause patients to develop negative emotions, such as anxiety and depression.
Kaya and Oskay (2020) (Turkey)	Cross-sectional	278 infertile women	ISS, BHS	The mental health of infertility can be affected by stigma.
Ozturk A. et al. (2021) (Turkey)	Cross-sectional	298 infertile women	ISS, BDI	Depression increased as stigmatization increased.
Öztürk R. et al. (2021) (USA)	Cross-sectional	786 women	PSS	Women were subjected to emotional and family violence because of infertility, and there were a huge psychological burden and a sense of stigma.
Fang et al. (2021) (China)	Cross-sectional	369 couples with fertility difficulties	The self-designed stigma scale; K10	Psychological distress in infertile patients increases with the increase in stigma.
Zhang et al. (2021) (China)	Cross-sectional	254 infertile women	ISS	In Zhejiang, China, infertile women experience moderate to high levels of stigma, which can lead to psychological stress, mainly in the form of social withdrawal.
Lin et al. (2021) (China)	Cross-sectional	245 infertile women	A 7-item Infertility Stigma Scale; POMS	Self-stigma can lead to negative psychological.
Küçükkaya and Kiliç (2022) (Turkey)	Cross-sectional	198 infertile women	ISS, IDS	The psychological effect of infertility increased among women as the Infertility Stigma Scale total scores and its sub-dimension scores increased.
Yokota et al. (2022) (JPN)	Cross-sectional	254 infertile women	ISS, HADS	Stigma can predict anxiety, depression, and psychological distress in patients.
Zhao et al. (2022) (China)	Cross-sectional	266 infertile women	ISS,SADS	The stigma can cause patients to have social avoidance tendencies and distress in actual interactions.

SCQ, Social Communication Questionnaire; FPI, Fertility Problem Inventory; BAI, Beck Anxiety Inventory; HADS, Hospital Anxiety and Depression Scale; ESS, Experience of Shame Scale; BDI, Beck Depression Inventory; SDS, Self-Rating Depression Scale; PSS, Perceived Stress Scale; ISS, Infertility Stigma Scale; BHS, Beck Hopelessness Scale; STAI-Y, State-Trait Anxiety Inventory; HSCL-10, The Hopkins Symptoms Checklist-10; POMS, Based on the Profile of Mood States; IDS, The Infertility Distress Scale; SADS, Social Avoidance and Distress Scale; OAS, Others as Shamer Scale; K10, The 10-item Kessler Psychological Distress Scale.

TABLE 3 Summary of the effects of disease stigma on the quality of daily life in female patients with infertility.

References	Design	Sample size	Instruments	Findings
Van Rooij et al. (2020) (Ghana)	Cross-sectional	38 women, 11 men	ISS, FertiQoL	Stigmatization was negatively correlated with fertility quality of life.
Jing et al. (2021) (China)	Cross-sectional	768 infertile women	ISS, FertiQoL	The stigma affects a patient's quality of life.
Jing et al. (2022) (China)	Cross-sectional	588 infertile women	ISS, FertiQoL	The higher the stigma of women receiving treatment, the worse the quality of life.

ISS, Infertility Stigma Scale; FertiQoL, Fertility quality of life.

TABLE 4 Summary of the qualitative studies.

References	Design	Sample size	Instruments	Findings
Dyer et al. (2002) (South Africa)	Qualitative	30 infertile women	In-depth interviews	Many women described how others cursed them. They suffer great personal suffering within themselves and can have serious social consequences.
Nieuwenhuis et al. (2009) (Nigeria)	Qualitative	7 infertile men, 8 infertile women	In-depth interviews	If a woman fails to conceive, she may be taunted by her in-laws, neighbors, and relatives, which can have severe social, psychological, and economic impacts on her life.
Nahar and Richters (2011) (UK)	Qualitative	31 infertile women	The life-history method	In rural areas, women unable to have children are strongly humiliated and belittled. They feel socially isolated and abandoned by their families.
Fledderjohann (2012) (USA)	Qualitative	107 infertile women	Semi-structured interviews	Infertile women face severe social stigma. Many women believe that they bear a higher responsibility for infertility than men, which puts them under greater psychological stress and faces more severe social consequences.
Tabong and Adongo (2013) (Ghana)	Qualitative	15 childless couples, 45 couples with children	In-depth interviews	Couples unable to have children are ostracized by society and criticized by neighbors, resulting in the physical and mental impact on infertile patients.
Daibes et al. (2018) (Jordan)	Qualitative	14 infertile women	Semi-structured interviews	Infertile women reported that they were stigmatized by society and the ego due to infertility, manifested in social exclusion and isolation, which led to increased psychological stress and a decline in their quality of life.
Ofosu-Budu and Hanninen (2020) (Ghana)	Qualitative	30 infertile women	phenomenological methods	Some women revealed that, due to the high stigma, they are considering leaving their homes to reduce discrimination and exclusion from the outside world.
Taebi et al. (2021) (Iran)	Qualitative	17 infertile women	Semi-structured interviews	Study participants were often badly evaluated by the outside world and internalized the stigma as worthless, adding to their own guilt.

Specifically, when infertile patients feel more ashamed, they seek less social support and tend to avoid social activities in the form of avoidance and marginalization, followed by greater distress (Slade et al., 2007; Ozturk A. et al., 2021; Zhang et al., 2021; Zhao et al., 2022).

3.4. Effects of the stigma on quality of life in infertile women

Three studies (Van Rooij et al., 2020; Jing et al., 2021, 2022) found that stigma can prevent infertile women from maintaining a normal quality of life. Society and the public are prone to give birth to a negative evaluation of infertility patients, leading to their social rejection, which increases patients' anxiety, depression, feelings of inferiority, and serious self-devaluation (Fu et al., 2015; Daibes et al., 2018). It can also lead to social withdrawal and reluctance to contact and communicate with others (Fu et al., 2015; Daibes et al., 2018). In the long run, the resulting stigma can negatively affect the quality of life of infertile women by reducing their self-esteem and self-efficacy (Remennick, 2000; Çapik et al., 2019).

Therefore, targeted, long-term interventions are needed to reduce the stigma in infertile patients to improve their quality of life. Healthcare workers should strengthen psychological counseling for infertile patients and encourage them to participate in fun group activities to improve their well-being (Domar, 2018). In addition, studies have shown that health insurance is vital for infertile women, and the purchase of insurance can reduce the burden of treatment on patients, so that their quality of life remains unchanged (Jing et al., 2022). In the future, more assistance will be required for uninsured infertile women to ensure their basic living standards.

3.5. Findings from the qualitative studies

Eight out of 28 qualitative studies (Dyer et al., 2002; Nieuwenhuis et al., 2009; Nahar and Richters, 2011; Fledderjohann, 2012; Tabong and Adongo, 2013; Daibes et al., 2018; Ofosu-Budu and Hanninen, 2020; Taebi et al., 2021) have found that stigma can impact a woman's daily life and psychology. These studies have reflected that infertile women face severe social stigma. Many women believe they are more responsible for infertility than men, putting themselves under more psychological stress and serious social consequences.

4. Intervention of disease stigma

Infertile women have different levels of stigma, either from themselves or from family, friends, classmates, and society (Slade et al., 2007). Stigma not only leads to negative emotions such as anxiety, depression, and low self-esteem in infertile patients but also leads to decreased life satisfaction, social isolation, and social avoidance, which severely affects their daily work and communication ability with others (Naab and Kwashie, 2018; Hassan et al., 2020). Therefore, there is a need for stigma interventions for infertile women. First, giving patients adequate social support. The most common source of stigma is external rejection and humiliation. A Nigerian study found that lack of support from the partner increased depression and anxiety in infertile women (Slade et al., 2007). Another study found that the adverse effects of infertility decreased significantly as infertile women received more social support (Zegers-Hochschild et al., 2017). Therefore, family members should be encouraged to give patients more companionship and care, comfort them when depressed, and prevent them from feeling alienated. Second, providing them with professional psychological counseling. When patients seek outside help, consultants must deeply understand their emotional and psychological change, understand their social avoidance and the cause of the pain, provide them with scientific cognitive intervention therapy and psychological guidance, help improve their sense of shame and sadness, and help them better fit into society and participate in regular social activities with a positive attitude. Third, improving the medical and public health service system. The high cost of infertility treatment places a huge economic burden on patients who are already reeling under great psychological stress. Developing targeted health insurance schemes or reimbursement of costs can help meet the health protection needs of patients, thereby reducing their medical burden and enabling them to receive treatment in a more positive mindset. Fourth, education is the most powerful weapon against social stigma. Infertility education should be strengthened to raise awareness of social stigma among infertile women. Simultaneously, rational fertility concepts can be introduced to patients, and their notion of fertility can be changed through active peer guidance.

5. Discussion

Infertility is not a simple condition. It affects the physical and mental health of patients in many ways. This review summarized 28 studies and found that infertility-related stigma can negatively impact the psychology and daily life of women with infertility. The stigma can reflect a patient's psychological attitude toward infertility and the quality of life. Patients with high stigma have high fertility pressure and are prone to anxiety and depression, affecting their quality of life.

This review found that negative social interactions or inadequate social support can increase stigma and make patients suffer more (Slade et al., 2007; Akizuki and Kai, 2008). During interpersonal communications, infertile patients with high stigma often suffer from feelings of inferiority, loneliness, and self-blame due to the fear of being ostracized by society and hurt by gossip, and avoid social activities in the form of self-seclusion, marginalization, and reluctance to communicate with family and friends, and then suffer from more severe psychological problems (Van Rooij et al., 2020; Zhang et al., 2021). A Chinese study showed that social support could protect infertile women in China from depression (Zhang et al., 2021). Stigmatized infertile women may be psychologically burdened by confiding in their husbands or other family members (Li et al., 2017). Another study discovered that infertile women were significantly less negatively affected by infertility as their social support increased (Zegers-Hochschild et al., 2017). Therefore, adequate social support may eliminate the anxiety and stress that comes with infertility. Healthcare professionals can create a comfortable environment for patients and provide appropriate psychological counseling to let them know that they are not alone and to help them face the disease with an optimistic attitude (Zhao et al., 2022).

At the same time, the study also found that improving education level and increasing employment opportunities are very important external factors in reducing the stigma of infertile women. Most articles report that the improvement in women's education level can help reduce female stigma, which may be because the improvement in women's education level will affect women's sense of identity with traditional gender concepts, and women with a higher education level have better self-regulation ability in the face of stressful events. The improvement in women's education level contributes to a better economic position and provides them with more opportunities and income in the labor market.

In traditional societies, childbirth and procreation are determinants of social status in society and the family and are seen as the main tasks of women, and women who fail to perform this responsibility are blamed and ostracized (Keskin and Babacan Güm, 2014). As a result, infertility patients are more concerned about childbearing's importance and potential significance and show a stronger sense of stigma. This review found that adverse effects on mental health only occur when infertile people agree with others to endorse the stigma and internalize this stigma as self-stigma (Corrigan and Rao, 2012). For example, women with a high level of irrational fertility in some traditional cultural environments tend to identify with the importance of childbearing. When they discover they are infertile, they define themselves as having negative traits, believing they are inferior, worthless, and flawed, and feel self-blame and guilt because they are unable to meet social norms and family expectations (Ergin et al., 2018; Huang et al., 2019). A previous study showed that individuals with lower self-esteem experienced more severe psychological distress when they experienced major stress or setbacks. Conversely, high self-esteem protects individuals from emotional distress (Fang et al., 2021). Therefore, self-esteem is an essential element that mental health professionals must consider when dealing with mental health issues in infertile patients. Research suggests that psychological resilience plays a vital role in fighting the pain and impaired quality of life specific to infertility and can be seen as a nonspecific protective factor (Herrmann et al., 2011). Therefore, when counseling patients with involuntary infertility, due consideration should be given to help improve their psychological resilience so that they learn to appreciate and accept themselves, boost their self-confidence and self-esteem, and help them cope with daily social activities with a more powerful mindset.

Based on the assessment results, regardless of the cause, women today suffer more self- and social stigma from infertility. Therefore, in the future, countries should expand the learning opportunities for girls and women, especially those living in poor areas and hailing from poor families. And to build a harmonious and inclusive culture, it is imperative to further integrate gender equality awareness into the whole process of education and even every aspect of economic and social life, and create a more gender-friendly educational and social environment. At the medical level, infertility-related stigma should be included within the scope of nursing evaluation, and the psychological state and quality of life of patients should be evaluated further. Psychosocial support is essential for infertility patients, and professionals can use psychological methods such as cognitive therapy and mindfulness therapy to improve their irrational fertility cognition level, thereby reducing the sense of shame. Meanwhile, nonmental health professionals can offer different types of stress-relieving measures such as relaxation, meditation, yoga, and other classes to help relieve negative emotions and improve the quality of life.

6. Limitations

This study aimed to review the effects of stigma on the psychology and quality of life of women with fertility difficulties. We recommend that medical staff and patients' families provide these hapless women adequate care and support. Concurrently, psychological intervention and public education are needed to change the patients' cognition, reduce patients' irrational cognition, and help patients respond positively to negative experiences. Although the criteria and literature quality have been strictly controlled, this paper yet has some limitations. First, the findings might get impacted because each study had a different purpose and was measured using different research tools. Second, the included studies were predominantly cross-sectional with mixed literature quality, which may impact findings. Third, this paper only includes Chinese and English literature and lacks an evaluation of non-Chinese and non-English literature.

7. Conclusion

Disease stigma is common in women with infertility. Being unable to have children puts a lot of stress on infertile women. And the outside world and their own shame can also increase the pain of infertile women. It seriously affects the patient's family and psychology, interferes with the mental health of the patient and her family members, and reduces the quality of their life. Therefore, the society as a whole should take into account the impact on patients such as the level of education, occupation and cost during treatment, pay attention to women's education and economic issues, and improve their social status and employment opportunities; Medical personnel should pay adequate attention to the psychological and emotional changes of infertile women and take reasonable measures to reduce the stigma of their disease and thus improve the quality of their daily life.

8. Relevance to clinical practice

This review has found that stigma can adversely affect infertile women's psychology and quality of life. Health workers and mental health professionals should be aware of the negative impact of infertility stigma on infertile women and monitor them as early as possible to assess the damage done to them and identify effective responses to minimize the impact. Providers can render narrative group counseling, cognitive therapy, couple counseling, psychological interventions, and other measures to regulate patients' negative emotions. Simultaneously, caregivers should improve patients' health education, correct their misconceptions, and assist them in coping with negative experiences to lessen the impact of stigma on them.

9. Accessible summary

9.1. What is known on the subject?

- Due to various sociocultural factors and other types of influence, infertile women generally carry with them a sense of stigma, and that stigma itself brings great psychological burden to them and affect the treatment process.

9.2. What does this paper added to existing knowledge?

- Women with infertility are more likely to experience stigma than men. This study is the first systematic survey of its kind on the stigma in infertile women to explore in depth the impact of stigma on mental health and their quality of life.

9.3. What are the implications for practice?

- The results have found that the infertility stigma can bring heavy mental pressure and psychological burden to infertility patients and affect their quality of life.
- This study entails medical staff to pay attention to the mental health of infertility patients, so that they can develop more targeted and effective nursing intervention measures, to reduce the stigma of infertility patients, bring down their reproductive pressure, and improve their quality of life.

Author contributions

YX: conceptualization, methodology, formal analysis, and writing—original draft. PY, LL, and YR: investigation. CN: resources. YZ, CN, and YX: writing—review and editing. All authors contributed to the article and approved the submitted version.

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Conflict of interest

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

Publisher's note

Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.1093459/full#supplementary-material

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Èquipe, community, traditional values, and reproductive rights

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Gender stereotypes still surround women's reproductive health for several reasons. Moreover, in the last 20 years, women's access to essential reproductive healthcare is becoming an issue contributing to inequality and exacerbating different kinds of violence (cultural and structural). The patriarchal system, intimate partner violence, and traditional cultural and conservative values have a huge impact on women's access to contraceptive information, services, and induced abortion. Gender-based human rights violation has a higher impact on those women who are part of a minority or suffer a marginalized social or economic condition. In the present article, the behavior of migrant women's networks is examined as a case study when they come into contact with the health and care sector with the aim to highlight how, in the context of childbirth, they can suffer discriminatory and violent treatment by the community and groups that defend conservative and traditional values due to the exercise of reproductive rights. The investigated context was the Careggi Hospital in Florence, Italy, but in further investigation, the research will take place in different medium-sized cities such as Terni and Perugia. The chosen methodology was that of second-level sources and qualitative interviews with the health personnel who usually deals with these women (two focus groups involving 11 persons of the hospital équipe). This article has two aims: (1) to present the conflict between community behavior and the right to reproductive health and (2) to discuss aspects of IPV as degrading or violent treatment due to the exercise of reproductive rights. The main finding underlined the importance of considering the link between rights, identity, culture, and relationships with the community.

KEYWORDS

reproductive health, violence, coercion, discrimination, community

1. Introduction

This Brief Research Report article presents original research conducted in 2021 at Careggi Hospital in Florence and some preliminary findings about the nexus between the équipe community, traditional values, and reproductive rights for migrant women. Even in recent decades, it is possible to affirm that it has experienced significant progress in the identification and recognition of rights in sexual and reproductive health from international organizations, which did not result—from a cultural point of view—in a real change in the experienced reality for many women. In recent years Western societies saw administrations being aggressive in seeking to cut funding for sexual and reproductive health and rights while stepping back on laws, policies, and agreements, going far beyond abortion (Girard, 2017; Franklin and Ginsburg, 2019). The focus on the state of physical, mental, emotional, and social wellbeing, and not only the absence of disease, dysfunction, or weakness linked to sexual and reproductive

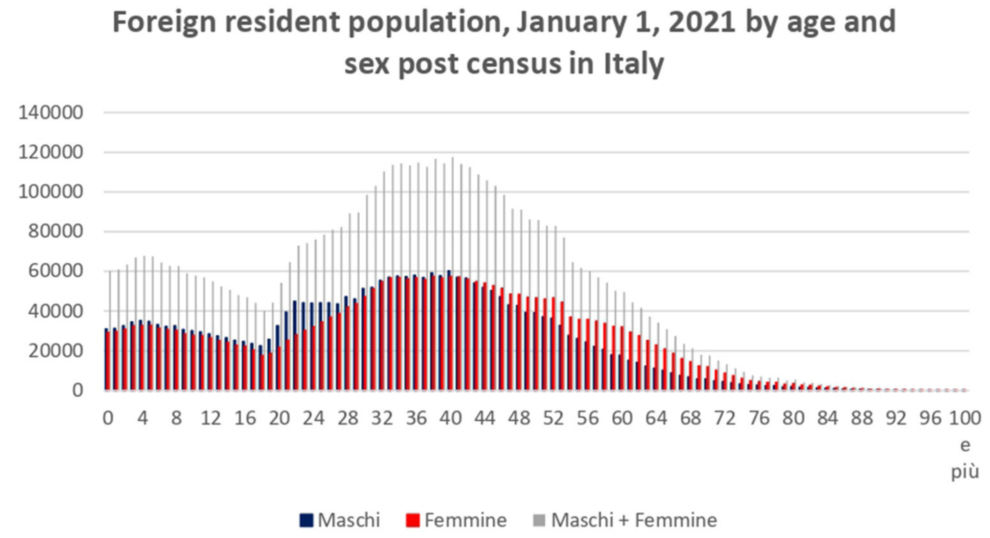

FIGURE 1
Foreign resident population, Italy 2021. Personal elaboration on Demo Istat data https://demo.istat.it/strasa2021/index.html.

rights, begins to feel quite unrealistic if one thinks that in the last 20 years gender stereotypes surrounding women, direct, cultural and structural violence against women rates have constantly been growing. In a context like the one rapidly outlined, the social attention on these particular women's rights decreased as the pandemic situation forced isolation and reduced time for social relations. It had a great impact on the doctor–patient relationships, even in health structures. Different studies showed that there is a link between social inequality and access to health services and particularly to pre- and post-partum care in the EU (Healthcare Commission Annual Report and Accounts 2008/09, 2009; Appleby et al., 2011) as migrants are more often part of the marginalized or disadvantaged population suffering barriers in accessing obstetric and/or midwifery-led care (Wolff et al., 2008). This case study focused on the behavior of migrant women's community and partners when they come into contact with the health and care sector to understand how difficult this situation can be.

Migrant women's conditions in their destination country are associated with a lack of "communication and connection" to others (Lyberg et al., 2012). Intimate partner violence (IPV) in reproductive health, conceptualized as the negation of women's decision rights in reproductive health, is an issue, mostly if one thinks about the first generation of migrant women who cannot speak the destination country's language, thus experiencing structural and cultural violence. In Tuscany, there are various foreign communities: Sri Lankan, Pakistan, and Indian women generally have problems understanding Italian. When a woman cannot communicate by herself, her only connection is her partner or a member of her community who acts as a filter and a medium between her and the care structure. These circumstances of vulnerability expose women to a high level of stress as they are still subject to the origin country's cultural expectations while needing to adapt to a different environment (Earvolino-Ramirez, 2007; Norris et al., 2009). The necessity to keep alive one's own identity is an issue, but for women coming from patriarchal societies, it can be a dangerous choice. Patriarchal system, cultural and conservative values in some cases are connected to a less informed gender-based human rights environment. Newly arrived people are easily reluctant to talk or even to collaborate in collecting data; cultural mediators or friends are not always available resources. To build up a relation of trust and collaboration, the length of the stay at the care structure or the hospital is as crucial as the relation with the équipe, but unfortunately, migrant women have a low rate of planned and recommended visits. The efforts to prevent the rise of the inequality rate linked to unequal health system access are growing and several good practices are ever more popular. By the way, the culture of origin has a huge impact on women's choices.

According to the authors, the context of childbirth is a very crucial moment as women's cultural background plays a role in reproductive health (Spadea and Cois, 2004; Mendez et al., 2014). The potential conflict with the origin community and partner can be exacerbated by the need to ensure a better life for the child in contrast to a negative personal experience due to cultural habits. The growing interest in migration phenomena is more and more linked to the ways in which women are implicated in networks and "extended families" (Granovetter, 1973; Wellman and Gulia, 1999; Portes and Rumbaut, 2001). In Italy, the total number of migrants in 2021 is 5.171.894 (ISTAT, 2022, see Figure 1) counting 2.524.644 men and 2.647.250

women, with a higher concentration in the ages 30–45, as shown in the table mentioned later. It is possible to say that migration is a stable reality, with a constant rate as time goes by.

Current flows confirm a growing family dimension (Hartwig et al., 2008); at the beginning, the number of first-generation migrant women who experience pregnancy and childbirth in destination countries is quite high. For the next generation, migrants' behavior tends to be analogous to that of the natives [Certificato di assistenza al parto (CeDAP), 2016]. Foreigners tend to compensate for negative birth rates at the beginning, but in a few years, a reduction in fertility rate tends to occur, an issue that should be investigated. Actually, the usual age of the mother for Italian women is 32.8 years, while it drops to 30.2 years for foreign citizens. Notably, 44.2% have a medium–high level of education, but among foreigners, it prevails a medium–low education (45.9%). From a personal and collective point of view, the interaction with the health sector throughout childbirth is perceived as a significant time (Francisco-Menchavez, 2018). "Migrant women often have unmet social and economic needs during pregnancy, and are more likely to have problems unaddressed by health care systems" (Quintanilha et al., 2016) and even when not against prenatal care, women develop some trust problems with caregivers in part for language barriers and accessing interpreters. Dialog and confrontation are the first steps to building up a trust relation with health personnel; sharing vision, cultures, and data are of absolute importance to elaborate a strategy in the best interests of the mother and the child, in full respect of their rights. Migration data in Italy are non-particularly focused on IPV or reproductive rights; this gap represents a limit to reflection on the issue and to the construction of policies that can improve the situation.

2. Method

The field analysis involved privileged observers: 11 health professionals who work or have operated in the birth center of the Careggi hospital in Florence. The study was conducted through the technique of two exploratory focus groups (FGs) taking place in August and September 2021 in remote, as the COVID-19 protocols could not admit interviewers at the hospital. The FG was conducted by the authors and the questions obtained ethical approval from the hospital. The chosen tool could work, even if remote, as an information catalyzer; the interaction between the participants, who already knew each other, was appropriate to bring out plentiful original information, personal stories, and professional experiences. The research aimed at gathering and linking the approaches, evidence, and attitudes of health professionals toward the experience of migrant women's motherhood. All participants (two men and nine women directly involved) had at least 10 years of experience in Italy and abroad (with hundreds of case experiences with migrants indirectly involved). The focus group represents one of the classic tools for qualitative research (Corrao, 2005); this unstructured participatory group interview aims at encouraging people to communicate with other subjects by involving them in the process of reflection and analysis. The results of the FG, collecting data from personal and group experiences, cannot indicate general behaviors, but for this reason, they constitute a privileged place to deepen knowledge of some specific behaviors and experiences. This method is not a representative one from a statistical point of view but is well suited for investigating certain qualitative parts of a topic. The basic idea of this method is that the interaction among interviewees is an important source of information and a privileged point of observation for reflection by participants and interviewers. The interaction also allows for deepening the topics of analysis by proceeding with ever greater levels of detail and allowing more levels of analysis and discussion. The interview went until the saturation point: the section is defined as saturated and representative when, through comparative analysis, all the topics covered by the study are explored and filled, and some information starts to be repeated. One can reasonably say that saturation starts when further questions do not lead to an enrichment of knowledge of the phenomenon but tend to confirm and reaffirm concepts and situations already investigated in previous moments. The talk was also useful for health personnel in elaborating on personal/professional experiences that were, in some cases, very touching. The emotional exposition to the intimate sphere together with the awareness of being the first net dot for problem assessment and first response to dangerous situations can be very demanding but at the same time of incomparable importance to suggest new solutions.

The question framework contains two thematic areas composed as follows:

(a) Structural data of the respondents (sub-area—professional experience/task) and
(b) Migrant women and care systems (sub-area—care relationship/cultural aspects/good practices).

The focus group was oriented to investigate the following:

(a) How do migrant women respond to the care system and in dealing with health personnel?;
(b) Can the different cultural and value systems linked to tradition and implicit knowledge of the care practices create problems?; and
(c) Does the method highlight good practices?

Intimate partner violence was not clearly mentioned as it is a very sensible topic. The dialog during the FG suggested the issue that was treated in the terms chosen by the interviewees.

In our society, the experience of motherhood is usually managed within a medical-healthcare framework and the family and social environment are still crucial. The motherhood experience for migrants emerges in a material and symbolic way as it shows how crossing borders means creating new forms of identity, which are, in any case, hybrid and difficult. When such an important event occurs in a foreign context, in many cases, it changes one's habits and forces to adapt to the new environment. Practical complications are added to psychological vulnerability in some cases, in particular, a condition of double vulnerability: the one experienced by all women in a moment of change like this and the one linked to becoming a mother far from one's own family and culture. The elaborative solitude of migrant women is caused by the loss of external references, while relational exchanges within the family group can be hard. This particular point has been deeply investigated to assess the vulnerability rate of these women in connection with the awareness of their rights. Motherhood generates an experience in which one re-contacts one's own maternal self, in terms of origins and belonging; at the same time, giving birth in another context also means facing the sense of uprooting and the lack of relational affective references to the present. The origin country's culture can be somehow oppressive, but with no connection to the destination country's culture this process, which does not necessarily involve the abandonment of one's knowledge and habits, could be very difficult.

The choice to listen to health personnel instead of migrant women was forced by COVID-19 restrictions and the understanding of the fact that it is still very complicated to invite these women to an open dialog on these topics without putting them in risky situations. Data were processed through transcription, identification of major themes, and the interpretation of experiences and ideas.

3. Results

It is not possible to talk about community, traditional values, and reproductive rights, leaving out the relation between the migration phenomenon and the migration network. A great part of the choices made by migrants is elaborated in a dialectic relation with the community of origin in the country of birth and residence. The support migrant can take advantage of is silently linked to a common desire to keep the origin culture alive. After this premise, it is possible to face the issue starting from the migration phenomenon that is a culturally and socially constructed collective project, as it involves migrants, non-migrants, and potential migrants. It is perceived at the same time as an effect of the action of networks and as the result of push and pull factors (social, economic, and political factors/stress). Consequently, being part of the network implies a dynamic position between the micro and the macro level. The social context largely determines individual decision-making processes as it is rooted in a strategy to react to structural determinants (Haug, 2008). Migrating is a decision implying not only the wealth and welfare level of a determined society: The opportunity to count on the care and solidarity network is a very important issue, too (Moro et al., 2012). Migration networks produce different forms of social capital, which ensure the positivity of the migratory experience and can be converted into economic–financial or human capital (Ambrosini, 2020). Family networks play a central role as they represent culture, tradition, material and symbolic support, and crucial points while starting a new family in a vulnerable position. As Cook says, "no society, no religion, no culture and no system of national law has been neutral about issues of human reproduction" (Cook et al., 2003). The reason for this lies in moral, ethical, religious, and identity questions. Sexual and reproductive rights have progressively been recognized in the international arena, but their progress and scope have not always been received without controversy. Migration processes fuel the confrontation between different cultural approaches and law philosophy: in the studied case, origin country's culture and network can be a source of wellbeing and support for the mothers-to-be; but on the other hand, they can be a conservative environment in which these women cannot meet their rights, even if they have the possibility to improve their life quality because coercive and discriminatory practices lead to the instrumentalization of women's bodies. A particularly negative effect can be individuated in the partner's choice to delay women's reproductive rights through degrading or violent treatment with the aim of controlling the woman and her body.

It is quite common that access to public health facilities is not yet well perceived by migrant women because of an "extreme" medicalization of birth; for this reason, migrant women tend not to build a trusting relationship with health personnel. The imagination of birth, the relationship between mother and child, is in their mind "more natural" (citation from the FG); health control and medicines are linked to illness and not to a positive and normal state (Augé and Herzlich, 2013). Different social habits and language barriers can generate misunderstandings; questions about sexual life and birth control could be perceived as inappropriate or absolutely unacceptable, even felt like a form of violence if questions comprehended information about the husbands' behavior. The development of health and sexual rights, as well as medical protocols supporting it, cannot be read in a decontextualized way; they must be analyzed within a broader scene made of social and religious identity. The scarce elaboration on human rights of certain countries is not a mere legislative matter; it is part of cultural and moral norms, and being a migrant can mean bringing part of this baggage to another place, having the feeling of being mistreated by hospital personnel for one's own identity culture can bring the migrant to refuse care and dialog.

Childbirth can be an empowering time in which women, through a dialog with health personnel, other women, and the community network, can estimate the impact and consequences of different approaches and practices, being more aware of rights related to sexual and reproductive health. To take this path, it is essential that their partner does not object or hinder it. Origin community and partners are relevant actors; the challenge that lies ahead in this emancipation process has to do with identity, control, power, and roles and can include violence as "the rupture of the dialogue between self and other" (Cipolla, 1997) among members in case of irreconcilable positions. Childbirth is a peculiar moment in which tradition and identity are not just the celebration of one's roots but the projection of these roots in the future. Assessing the future requires addressing the challenges that lie ahead and that have been present since the initial discussions: identity relations, rights, and self-determination. Women's right to sexual and reproductive health is crucial to their self-government and their right to make significant decisions about their lives and health; unfortunately, policies and protocols are not enough to bring about a decisive cultural change, and more effort is needed to improve women's living conditions.

"Culture can be understood primarily as the way of doing things in people's everyday lives [...] it includes knowledge, belief, art, morals, law, literature, lifestyles, ways of living together, value systems, traditions, customs, and any other capabilities and habits acquired by people as members of a society" (Johannes Malesa, 2022, p. 143): Culture is not a given object once and for all, but underestimating the effort needed to overtake such a huge identity question can be naïve. Even patriarchal culture can be perceived as reassuring by women living in a situation of a high level of vulnerability or risk like in a prisoner's syndrome. In patriarchal societies, men's choices are incontrovertible; often, they have a negative influence on women's sexual knowledge, beliefs, and attitudes. Men's position of ownership of women often results in gender inequity, generating violence, marginalization of women while isolating them from other persons with different cultures, and discrimination from others who perceive them as primitive. Cultural negotiation is a crucial step toward a new shared path in the destination country, but linguistic barriers are, unfortunately, the greatest obstacle. Fostering dialog to overcome women's isolation is essential to build up a positive process in the best interest of the mother, the children, and the relation with their origin community.

4. Discussion

This study focused on community, traditional values, and reproductive rights, paying special attention to the phenomena that take place within health systems, as they are a valuable space in health promotion and generating culture. Clearly, the duration of the doctor–patient relationship is very important to allow the making of trust and a positive dialog to negotiate information and knowledge. Sociocultural factors shape women's health behavior, and their feelings of not being understood or welcome have a great influence on migrants' health choices. If migrant women feel they are treated differently based on ethnicity or nationality, this can have negative consequences on the delivery of healthcare services (Grove and Zwi, 2006; Willen, 2012). It is not relevant if the feeling is proper or just the consequence of a misinterpretation of reality; for the first generation of migrants, the integration process is yet to be accomplished, and in such a vulnerable state, conformity to traditional values and behaviors can give a sense of protection and correctness. In some cases, coming in touch with the origin country's community abroad can pass through the respect for traditional values as a condition for acceptance (Sayad, 2002). The adoption of the country of destination's cultural practices can be perceived as the craving to abandon one's despised identity and become a member of a different community. It happens that some, particularly, closed communities become almost resistant to the destination country's community; others, on the other hand, can undertake a radical assimilation process (Romania, 2004). A newly immigrant man would be involved in a totally puzzling environment if he did not find firm points of orientation identity with reference to his past life, the stability that can be easily found in their own national group. The analysis of networks' behavior can be very useful in understanding processes of cultural change and assessing the risk connected to the rediscovery or redefinition of identity.

In Europe, health inequalities still remain, more detectable for socio-economic groups and for migrants (Fassin, 2006). These inequalities have been recognized as a priority at the European Council of Lisbon 2000. In Italy, motherhood is usually monitored within a medical-healthcare context, but in health personnel's experience, this attention is not always welcome. Migrants who are not used to this medicalized approach feel uncomfortable with such a great number of clinical exams and control visits: "For many of them, this whole process is exaggerated... there is just a very different attitude, they live in pregnancy in a much more natural and more spontaneous way... Building a dialogue on trust and understanding when imposing protocols and prohibiting traditional practice can be hard... some of them bring at the hospital food and drinks that in our experience can do harm... at the same time it is very common that women who cannot speak Italian and have no network can find at the long-term care unit a support community. Sharing similar experiences and difficulties can push them to feel well disposed to be of some help for other patient. Fairly often some patients played a vital role in acting as cultural mediators, teachers and psychological support persons" (Health Personnel).

As Bonfanti noted, "in our (Western) society, the experience of motherhood is usually managed within a medical framework. [...] Migrant motherhood is generally experienced in the perspective of having children who can become Italian citizens, even if starting from culturally different points. These women therefore do not try to recreate the concept of motherhood of their country of origin, they are completely absorbed in the dimension of change. However, the need to maintain the memory of the culture of origin remains fundamental while preserving some of the values that underpin the reproductive experience in it" (Bonfanti, 2012; p. II). The ethos of belonging has its roots in the experience of self, identity, and recognition (Corvino, 2021): every group, as far as identity is concerned, is at the same time an individual and a collective/group construction; this issue, for a negative perception, can produce a painful feeling of disvalue and misrecognition for the minority group. Misrecognition can enhance a condition of double vulnerability (Eriksson and Lindström, 2008), that is to say, the life-changing experience of motherhood as a challenging moment and the becoming mother away from one's own family and culture: "The moment of childbirth is very critical and this does not always help to be open to others, a too intrusive indication can be mistaken as a racist attitude, it is known that a lonely person, perhaps afraid, can easily feel attacked, discriminated. Maybe they are so used to racist attitudes that they have cultivated a vulnerability" (Health Personnel).

It happens to meet women who are poorly supported by their partners as in some cultures childcare is considered a women-only responsibility or a cultural taboo. When language barriers are a real obstacle, these women can face great difficulties: "Sometimes we feel these women avoid questions because these are taboos and they shouldn't talk about it… also because they have no right to a choice. In various cases women, in the hope of giving birth to a son, persisted facing pregnancies even when it was absolutely risky. Sometimes husbands act as translators and filters of medical conversations in order to keep the wife in a controlled cultural contest to limit potential cultural contamination" (Health Personnel).

This preliminary study underlined the importance of considering the link between rights, identity, culture, and relationships with the community. Community and partners can be treasured resources while facing such a challenging experience as giving birth abroad. Culture and dialog among women and health personnel can help them to start a new path and possibly develop a positive relationship with the destination community. Such studies could provide significant insights for better focusing on the integration process and the realization of rights and empowerment while taking into consideration traditional identity and cultural aspects. An effective exploration would need to go beyond the qualitative studies to better assess risks and opportunities in order to elaborate policy and protocol advice.

Data availability statement

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

Ethics statement

Ethical review and approval was not required for the study involving human participants in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was not required from the participants in accordance with the national legislation and the institutional requirements.

Author contributions

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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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An ecological approach to understanding the impact of sexual violence: a systematic meta-review

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Aim: A systematic meta-review was conducted to examine (1) the broad range of negative and positive individual and interpersonal changes following adult sexual violence, as well as (2) the risk/protective factors at multiple levels of the social ecology (e.g., individual, assault, and micro/meso/exo/macro/chronosystem factors)—influencing the impact of sexual violence.

Methods: Searches of Web of Science, Pubmed, and ProQuest resulted in inclusion of 46 systematic reviews or meta-analyses. Review findings were extracted for summary and a deductive thematic analysis was conducted.

Results: Experiencing sexual violence is associated with many negative individual and sexual difficulties as well as revictimization risk. Only a limited number of reviews reported on interpersonal and positive changes. Factors at multiple levels of the social ecology play a role in the intensity of these changes. Reviews including macrolevel factors were non-existent, however.

Conclusion: Reviews on sexual violence are fragmented in nature. Although the use of an ecological approach is often lacking, adopting such a perspective in research is necessary for a fuller understanding of the multiple influences on survivor outcomes. Future research should evaluate the occurrence of social and positive changes following sexual violence, as well as the role of macrolevel factors in influencing post-assault outcomes.

KEYWORDS

sexual violence, social ecology, meta-review, psychotrauma, context, sexual violence impact

Introduction

According to the World Health Organization's definition, *sexual violence* is considered as "any sexual act against someone's will,[1] committed by any person regardless of their

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[1] Previous versions of this definition include "coercion". Coercion implies overt and covert forms of verbal or physical persuasion or force. The sexual act is thus committed without a person's freely given consent. Free consent is not present when one is not able to give consent due to one's age, a disability, or lack of awareness, nor when one is not able to refuse freely [e.g., in the presence of weapons, due to (threats of) physical violence, intimidation, pressure or misuse of authority; Basile et al., 2014; World Health Organisation, 2019].

relationship to the victim, in any setting" (World Health Organisation, 2015, p. 4). This definition of sexual violence can be applied to all genders and all ages and includes sexual harassment (i.e., non-contact sexual violence such as unwanted sexual comments), sexual assault (i.e., non-consensual bodily contact) and (attempted) rape [i.e., (attempted) non-consensual vaginal, oral or anal sex; Keygnaert, 2014]. Estimating the true prevalence of sexual violence is difficult due to the use of varying definitions of what sexual violence entails across studies. Not surprisingly, studies using more restrictive definitions (e.g., forcible rape) tend to find lower prevalence rates. International estimates of the prevalence of non-intimate partner sexual violence range from 3.3 to 21.0% of women over the age of 15 (Abrahams et al., 2014), and studies find that between 7.7 to 21.0% of women in United States have experienced sexual intimate partner violence (Bagwell-Gray et al., 2015). A European systematic review found prevalence estimates of adolescent/adult sexual violence ranging from 9.0 to 83.0% of women and 2.0 to 66.0% of men (Krahé et al., 2014).

Given that sexual violence seems to be a highly prevalent problem in society, it is vital to acknowledge the consequences of experiencing sexual violence in order to provide adequate support to survivors. In the past half century, the number of studies on the impact of sexual violence has increased tremendously, revealing a broad range of negative individual and social changes following sexual violence. In addition, research also supports that some survivors also report experiencing personal growth and other positive changes following violence. The severity of negative changes and the potential occurrence of positive changes following sexual violence depends on various factors (Hughes et al., 2005). Based on Bronfenbrenner's (1979, 1986) model, previous scholars have identified risk and protective factors for negative sexual violence outcomes at each level of the social ecology: individual level (e.g., sociodemographic variables, personality characteristics, coping skills, personal history), assault-related level (e.g., the relationship of the survivor with the offender, how coercion occurred, injury severity), micro-/mesosystem level (e.g., reactions from significant others toward disclosure), exosystem level (e.g., how institutions such as medical, legal and mental health systems provide support to the survivor), macrosystem level (e.g., [sub]cultural factors such as rape myth acceptance) and chronosystem level (e.g., lifespan transitions, prior victimization and revictimization; Neville and Heppner, 1999; Campbell et al., 2009).

Previous authors taking an ecological perspective toward understanding survivor adjustment and recovery following sexual violence have made important contributions to the literature by synthesizing the wealth of studies on this the topic (Neville and Heppner, 1999; Campbell et al., 2009). However, examination of this literature also highlights a number of gaps and limitations. For one, there are a limited number of systematic reviews of the research on the impact of sexual violence that includes ecological factors to understand how sexual violence affects survivors. Second, no prior reviews have simultaneously examined factors associated with negative individual (e.g., depression, posttraumatic stress disorder), interpersonal (e.g., changes in relationships with close and intimate others) and positive (e.g., posttraumatic growth, benefit finding) changes following adult sexual violence. Further, most existing reviews have not examined factors at multiple levels of the social ecology simultaneously, which is necessary to fully understand how these factors interact to affect survivor adjustment. A review which delineates factors associated with negative and positive individual and interpersonal changes following sexual violence is highly valuable for informing mental health policy, as well as for practitioners working with survivors (Hughes et al., 2005).

Given the large amount of available empirical evidence and research syntheses on the impact of sexual violence, and the broad range of variables related to our research topic, we conducted a "meta-review" (also referred to as "umbrella review" or "review of reviews"; Grant and Booth, 2009). Similar meta-reviews on the impact of child sexual abuse already exist (Maniglio, 2009; Hailes et al., 2019), but we are not aware of any published meta-reviews on the impact of adolescent and adult sexual violence (i.e., sexual violence that occurred when the survivor was 14 years old or older, hereafter referred to as "adult sexual violence" (ASA); Livingston et al., 2007). Thus, the overarching goal of the current study was to provide an overall picture of (1) the broad range of negative and positive individual and interpersonal changes following adult sexual violence, as well as (2) the risk/protective factors—including individual, assault, and micro/meso/exo/macro/chronosystem characteristics—influencing the impact of sexual violence, by summarizing the highest level of evidence (i.e., systematic reviews and meta-analyses).

Methods

The current meta-review was conducted using a systematic and rigorous approach based on the guidelines of the Cochrane Collaboration (Higgins and Green, 2011). The meta-review protocol can be obtained upon request. The literature search was initially administered in November 2018 and then updated in March 2023.

Literature search and inclusion criteria

A list of search terms was chosen after consulting review-experts and experts on the topic of sexual violence. Web of Science, PubMed and ProQuest were searched using the following search terms: Titles were searched using "(Sexual OR gender-based OR interpersonal) AND (exploitation OR trauma OR victimization OR violence OR coercion OR abuse OR intimidation OR force OR assault OR harassment) OR rape OR (forced OR coerced OR unwanted) AND (masturbation OR penetration OR intercourse OR sex)" whereas full texts were searched using "(Psychiatric OR Psycholog* OR psychosocial OR social OR adaptation OR maladaptation OR adjustment OR maladjustment OR function* OR dysfunction* OR symptoms OR impact OR recovery OR sequelae OR aftermath OR consequences OR effect OR health OR growth OR well-being OR mental OR interpersonal OR risk OR protective OR moderat* OR mediat*) and (Victim* OR survivor* OR family* OR couple OR relationship OR friendship

OR partner*).” Studies were retained if they were (a) systematic reviews or meta-analyses of the literature published in peer-reviewed scientific journals (i.e., no books, book chapters, book reviews, empirical studies, editorials or conference proceedings), (b) systematically reviewed studies on psychosocial changes after experiencing adult sexual violence or the factors influencing these changes, and (c) written in English. Reviews published until March 2023 were included. When possible, a filter for searching for reviews was added. Studies were excluded when they focused solely on child sexual abuse, non-sexual intimate partner violence or the physical sequelae of sexual violence, and when there was no focus on changes after sexual violence or factors influencing these changes (e.g., intervention, prevention and prevalence studies or studies focusing on perpetrators). References of selected papers were also screened to ensure all relevant studies for the current meta-review were included.

Study selection

After the initial search, 6,290 papers were identified, and after deleting duplicates 5,216 papers remained. The selection procedure comprised four phases (see Figure 1 for an overview of the selection procedure). In the first phase, the first and second author independently screened all titles for inclusion with an agreement of 86.1% (Kappa value = 0.79). Both authors discussed the disagreements until consensus was reached. In the second phase, both authors then screened the remaining 1,478 abstracts for inclusion resulting in an agreement of 85.2% (Kappa value = 0.80). Disagreements were discussed and resolved by both authors. In the third phase, the full texts of the remaining 270 papers were screened by the first author whereas the second author screened 50%, which resulted in an agreement of 72.1% (Kappa value = 0.54). Eligibility criteria on what is considered a systematic review and when to include reviews that do not exclusively report on adult sexual violence were re-evaluated. As such, reviews were included when they had conducted a systematic search and reported on studies systematically. Reviews that included at least one study on adult sexual violence/ sexual intimate partner violence were included as well. After this re-evaluation, papers without consensus were screened again, which increased the agreement to 82% (Kappa value = 0.70), resulting in 53 full texts. After screening the references of the selected papers, 4 studies were added, resulting in 57 papers selected for inclusion. In March 2023, an updated search resulted in the identification of 46 additional reviews. Altogether, this resulted in 99 reviews selected for inclusion.

Quality assessment

In the fourth and final phase, the quality of the included studies was assessed by the first author. The second author assessed the quality of 50% of the reviews of the initial search. For quality assessment, the following seven criteria were administered (Bambra et al., 2009; Maniglio, 2009, 2013): the presence of (1) a well-defined research question, (2) a well-defined search strategy, (3) inclusion and exclusion criteria, (4) a thorough data extraction, (5) a quality assessment of the individual studies, (6) an appropriate synthesis, and (7) the inclusion of more than one researcher in the screening, selection, evaluation, and extraction processes. The agreement on the quality assessment of the 53 studies found after the initial search was 79.8% (Kappa value = 0.62). After evaluation, studies were categorized as being of high quality (a score of 6 or 7), fair quality (a score of 4 or 5) and poor quality (a score below 4). Of all included studies in this initial search, 45% ($n = 26$) were of high quality, 35% ($n = 20$) of fair quality and 20% ($n = 11$) of poor quality. Poor quality studies were excluded as they did not extract data from the individual studies in a detailed manner. The updated search yielded 33 (72%) high quality and 13 (28%) fair quality studies. Eventually, this resulted in a final number of 92 high and fair quality reviews for data extraction. An overview of the included (fair/high quality) reviews and their respective quality scores is shown in Supplementary Appendix A (accessible through https://osf.io/2fkm9/?view_only=6b48853fee7f4bf6ab9ec334bd369c13).

Data extraction and coding

In a first coding phase, descriptive data on (1) paper characteristics (i.e., author, year of publication, journal), (2) search information (i.e., databases searched, whether a manual search was performed) and (3) study information (i.e., sexual violence definition, sample characteristics, changes assessed, risk and protective factors investigated) of the high and fair quality studies was extracted using an Excel spreadsheet (Maniglio, 2013). Reviews that also included primary studies outside the scope of this meta-reviews were included as well. In these cases, only the data relevant for the current meta-review was extracted (e.g., reviews on the impact of intimate partner violence were included if information on sexual intimate partner violence (SIPV) could be extracted). Descriptive information for each included article can be found in Supplementary Appendix A.

In a second phase, the data on the investigated changes and risk and protective factors were coded by the first author using deductive thematic analysis (Boyatzis, 1998; Braun and Clarke, 2006). More specifically, themes on changes and risk and protective factors were developed in advance based on empirical research on changes following sexual violence and Bronfenbrenner’s (1979, 1986) model. Three themes related to changes following sexual violence were identified: (1) Negative individual changes, (2) Negative interpersonal changes and (3) Positive individual and interpersonal changes. Six themes related to risk and protective factors were identified: (1) Chronosystem factors, (2) Individual factors, (3) Assault-related factors, (4) Micro- and mesosystem factors, (5) Exosystem factors and, (6) Macrosystem factors. Subsequently, the results of all reviews were reread carefully, summarized comprehensively and categorized by the first author into the themes outlined above. Information within a theme that appeared to be on the same topic was then grouped together into a subtheme. When difficulties arose in the categorization of a specific outcome, risk or protective factor, the first and second author reflected upon the potential categorizations in order to reach consensus.

In the third and final phase, the themes and subthemes were described narratively together with their interrelations and summarized into tables. When available, effect sizes

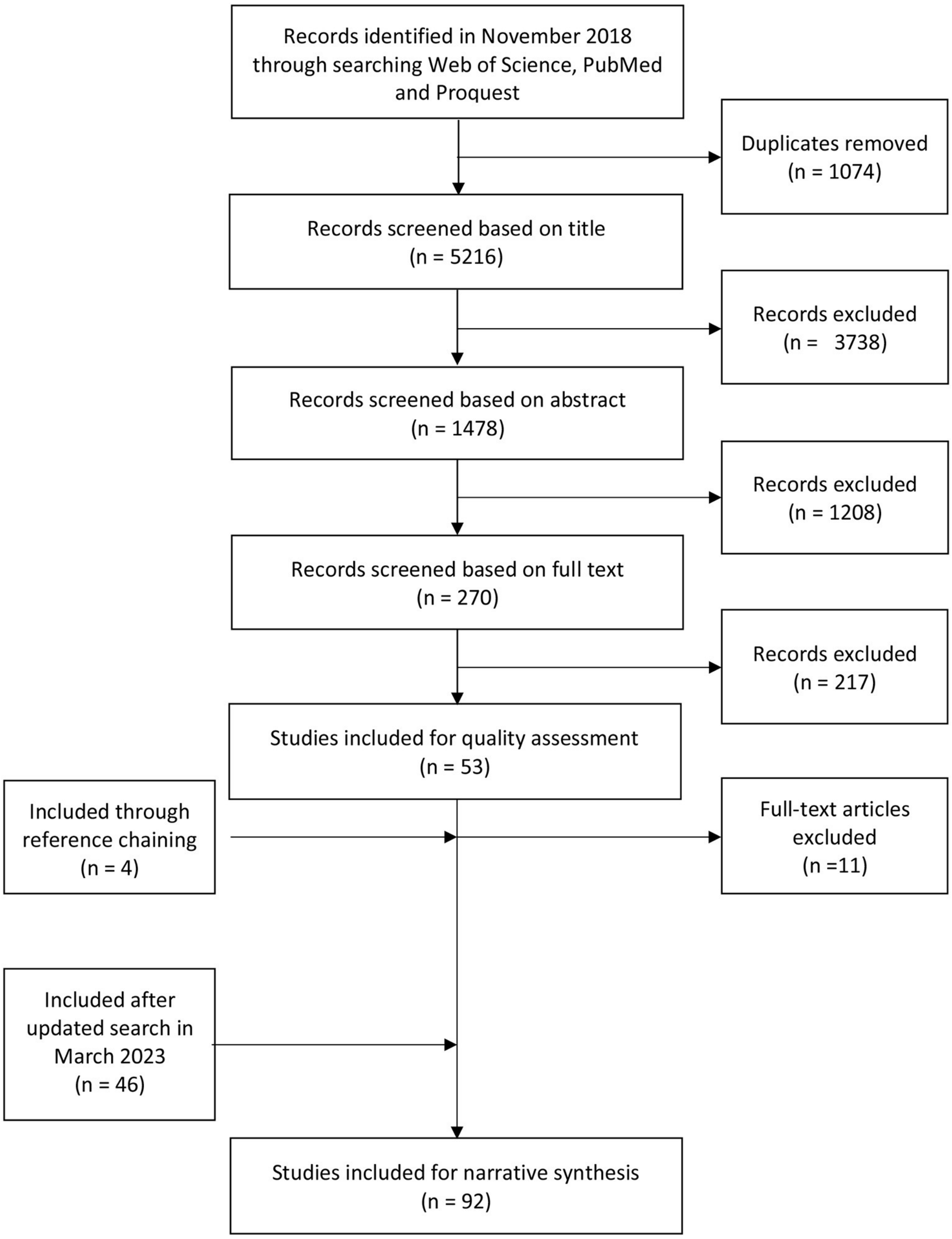

FIGURE 1
Selection of reviews.

or other relevant statistical information were added (see Supplementary Appendices B, C—accessible through: https://osf.io/2fkm9/?view_only=6b48853fee7f4bf6ab9ec334bd369c13).

Results

Characteristics of included reviews

The 92 included review studies encompassed over 1,154 relevant primary empirical studies with over 11,807,073 respondents. The reviews were published between 1999 and 2023 and included primary studies published between 1980 and 2021. Thirty-one reviews had a quality score of 7, 28 reviews had a quality score of 6, 25 reviews had a quality score of 5 and eight reviews had a quality score of 4. Sixty-eight reviews only included relevant quantitative primary studies, three reviews only included relevant qualitative primary studies and one only included relevant mixed-method studies. In addition, 10 included quantitative and qualitative studies, nine included all three- quantitative, qualitative and mixed method studies and one review did not state whether included studies were qualitative or quantitative. Nine reviews were meta-analyses, eight reviews included both a systematic review and meta-analysis, and 75 were reviews that synthesized the data narratively including systematic reviews, critical reviews, rapid reviews, scoping reviews and meta-ethnographies. Three of the reviews included solely longitudinal studies.

The impact of sexual violence

An overview of all documented positive and negative changes following sexual violence assessed in the included reviews can be found in Supplementary Appendix B (accessible through: https://osf.io/2fkm9/?view_only=6b48853fee7f4bf6ab9ec334bd369c13).

Negative individual changes

Seventy-four of the 92 included reviews investigated the association between sexual violence and negative individual changes.

Trauma- and stress-related disorders

Multiple reviews document a higher likelihood of receiving the diagnosis of *acute stress disorder (ASD), post-traumatic stress disorder (PTSD) or to report PTSD-related symptoms* (e.g., distress, arousal, avoidance of feared situations, intrusive thoughts, flashbacks, nightmares, other sleeping problems, anger and irritability and dissociative symptoms) among those who experienced sexual violence. Specifically, reviews show that a quarter to more than three-quarter of survivors report experiencing PTSD-related symptoms. Reviews including primary studies with control groups of non-survivors or survivors of other types of trauma report medium to large effect size differences in PTSD symptoms between groups (Van Berlo and Ensink, 2000; Classen et al., 2005; Wilness et al., 2007; Cook et al., 2011; Peterson et al., 2011; Steine et al., 2012; Trevillion et al., 2012; Wadsworth and Records, 2013; Ba and Bhopal, 2017; Chmielowska and Fuhr, 2017; Dworkin et al., 2017, 2023; Sparrow et al., 2017; Bows, 2018; Dworkin, 2018; Dame et al., 2020; Kahsay et al., 2020; Alessi et al., 2021; Forkus et al., 2021; Gallegos et al., 2021; Klein and Martin, 2021; Mazza et al., 2021; Zarchev et al., 2021; Klein et al., 2022; Lim et al., 2022; Spencer et al., 2023).

Anxiety disorders

In addition, sexual violence is associated with more *anxiety and specific fears* or phobias related to the sexual violence according to nine reviews (e.g., worrying it might happen again, fear of leaving the house, fear of sexually transmitted infections). More than one in 20 survivors to three-quarter of survivors report anxiety or anxiety-related behavioral changes, such as taking precautions to prevent experiencing another victimization, following the assault. Effect sizes comparing survivors to controls on anxiety symptoms range from small to large (Campbell et al., 2000; Ribeiro et al., 2009; Chen et al., 2010; Peterson et al., 2011; Wadsworth and Records, 2013; Larijani and Guggisberg, 2015; Ba and Bhopal, 2017; Chmielowska and Fuhr, 2017; Bows, 2018; Dworkin, 2018; Pulverman et al., 2019; Stewart et al., 2019; Dame et al., 2020; Kahsay et al., 2020; Pebole et al., 2021; Nicholas et al., 2022; Rani et al., 2022; Spencer et al., 2023). However, in some cases depression and anxiety are combined into one measure resulting in a combined effect size for both. In addition, two reviews reporting on anxiety found no significant differences when comparing sexual violence survivors to controls (Classen et al., 2005; Wadsworth and Records, 2013).

Mood disorders

Survivors are at higher risk for experiencing *mood disorders*. According to numerous reviews, up to two thirds of survivors report *depressive* symptoms and almost two in five patients with depression report having experienced ASA. In addition, when comparing survivors vs. controls and survivors of other trauma types, small to large effect sizes in depressive symptoms are found (Goodman et al., 1997; Campbell et al., 2000; Van Berlo and Ensink, 2000; Ullman, 2004; Classen et al., 2005; Ribeiro et al., 2009; Chen et al., 2010; Peterson et al., 2011; Beydoun et al., 2012; Dillon et al., 2013; Finneran and Stephenson, 2013; Mauritz et al., 2013; Wadsworth and Records, 2013; Alvarez-Segura et al., 2014; Ba and Bhopal, 2017; Chmielowska and Fuhr, 2017; Dworkin et al., 2017; Bows, 2018; Dworkin, 2018; Pulverman et al., 2019; Shamblaw et al., 2019; Dame et al., 2020; Godier-McBard and Jones, 2020; Kahsay et al., 2020; Paulson, 2020; Forkus et al., 2021; Klein and Martin, 2021; Mazza et al., 2021; Diez-Canseco et al., 2022; Klein et al., 2022; Nicholas et al., 2022; Rani et al., 2022; Lombardi et al., 2023; Spencer et al., 2023). In addition, 37% of patients with bipolar disorder report having experienced ASA, and a small to large effect size is found when comparing the bipolar disorder prevalence in survivors and controls (Mauritz et al., 2013; Dworkin et al., 2017). Finally, nearly two in five survivors report suicidal ideation and attempts, and medium to large effect sizes are found when comparing suicidality between survivors and controls (Ullman, 2004; Chen et al., 2010; Peterson et al., 2011; Dillon et al., 2013; Ba and Bhopal, 2017; Dworkin et al., 2017; Klein et al., 2022; Nicholas et al., 2022; Spencer et al., 2023). However, differences in depression and suicidal ideation between survivors and controls are not consistently confirmed in some reviews (Ullman, 2004; Ribeiro et al., 2009; Beydoun et al., 2012; Dillon et al., 2013; Finneran and Stephenson, 2013; Wadsworth and Records, 2013; Sparrow et al., 2017; Paulson, 2020; Forkus et al., 2021; Lim et al., 2022; Lombardi et al., 2023). Survivors also report feeling increased anger according to some reviews (Godier-McBard and Jones, 2020; Kahsay et al., 2020; Klein and Martin, 2021; Rani et al., 2022).

Substance use (disorders)

Having a sexual violence history is furthermore related to *substance use (disorders)*. Up to half of survivors report substance (ab)use and effect sizes for substance abuse range from small to medium when comparing survivors to controls and survivors of other trauma types (Goodman et al., 1997; Feldner et al., 2007; Meyer et al., 2011; Peterson et al., 2011; Finneran and Stephenson, 2013; Stockman et al., 2013; Wadsworth and Records, 2013; Heerde and Hemphill, 2016; Ba and Bhopal, 2017; Dworkin et al., 2017; Langdon et al., 2017; Sparrow et al., 2017; Dworkin, 2018; Stewart et al., 2019; Dame et al., 2020; Alessi et al., 2021; Forkus et al., 2021; Klein and Martin, 2021; Lim et al., 2022; Salim et al., 2022; Spencer et al., 2023). However, four reviews found no significant differences between ASA survivors and controls in substance use problems (Finneran and Stephenson, 2013; Heerde and Hemphill, 2016; Stewart et al., 2019; Forkus et al., 2021).

Other psychological disorders

Sexual violence is associated with other psychological disorders such as eating disorders, personality disorders and schizophrenic spectrum disorders. Specifically, nearly one in four *eating disorder* patients has experienced ASA, and more than half of survivors report disordered eating. Finally, multiple reviews found a small to medium effect size in disordered eating when comparing survivors to controls (Peterson et al., 2011; Bundock et al., 2013; Madowitz et al., 2015; Dworkin et al., 2017; Dworkin, 2018; Stewart et al., 2019; Dame et al., 2020; Klein and Martin, 2021; Spencer et al., 2023). In addition, between 39.0 and 87.0% of patients with a diagnosis of *borderline personality disorder* have experienced ASA (Peterson et al., 2011; Mauritz et al., 2013). One review, however, found no difference between ASA survivors and controls regarding the prevalence of borderline personality disorder (Trevillion et al., 2012). Finally, between six and 48.0% of patients with *schizophrenic spectrum disorders* report having experienced ASA (Goodman et al., 1997; Mauritz et al., 2013; Zarchev et al., 2021).

Self-perception

Six reviews found that survivors had a *less positive self-perception* (e.g., lower physical self-image, self-esteem, self-worth and self-respect) than healthy controls and survivors of other trauma types. In addition, 32.0% of survivors report negative self-perceptions (Campbell et al., 2000; Peterson et al., 2011; Finneran and Stephenson, 2013; Kouyoumdjian et al., 2013; Bows, 2018; Kahsay et al., 2020; Kouvelis and Kangas, 2021; Rani et al., 2022).

Health behavior

One review focused on how sexual violence is related to physical activity. Results supported individuals who regularly engaged in different forms of exercise differed in their likelihood of having a sexual violence history (with individuals who weight train having a higher prevalence of past sexual violence than runners) and that sexual violence survivors have an increased likelihood of having a sedentary lifestyle compared to controls (Pebole et al., 2021).

Academic and occupational functioning

Some reviews have focused on the impact of sexual violence on survivors' academic and occupational functioning. In general, up to a third of survivors report impairment in academic functioning (Peterson et al., 2011). Other reviews found that survivors report lower academic satisfaction, have lower GPAs, report lower academic self-efficacy and report increased academic distress, disengagement and absence (Stewart et al., 2019; Klein and Martin, 2021; Molstad et al., 2023). Sexual violence additionally is related to occupational functioning. Specifically, survivors report being more dissatisfied with their jobs, colleagues, and supervisors, as well as report decreased job productivity, commitment and attendance (Wilness et al., 2007; Stewart et al., 2019; Godier-McBard and Jones, 2020).

Somatic symptoms

Inconsistent results were found with respect to *somatic symptoms.* In reviews using survivor samples, up to 76.0% report suffering from somatic complaints including fatigue and chronic headaches (Ba and Bhopal, 2017; Kahsay et al., 2020). However, one review compared chronic headache sufferers and healthy controls and no differences were found with regard to ASA history (Paras et al., 2009). Two reviews similarly found no association of an ASA history with fibromyalgia (Romans and Cohen, 2008; Paras et al., 2009). When comparing survivors and controls, small to medium effect sizes were found for gastro-intestinal difficulties, psychogenic seizures, and chronic pelvic pain (Romans and Cohen, 2008; Paras et al., 2009; Wadsworth and Records, 2013).

Sexual changes

The association of sexual violence with *sexual changes,* is reported in various reviews that assessed the prevalence of sexual changes among SV survivor samples or compared samples of SV survivors and controls. Sexual violence is associated with high-risk sexual behavior with one review finding medium to large effect sizes for high-risk sexual behavior when comparing survivors to controls. Ten to nearly 90% of survivors report high-risk sexual behavior such as inconsistent condom use, using alcohol before sex, having casual sexual partners, or trading sex for money or drugs (Campbell et al., 2000; Maman et al., 2000; Messman-Moore and Long, 2003; Gielen et al., 2007; Meyer et al., 2011; Peterson et al., 2011; Finneran and Stephenson, 2013; Seth et al., 2013; Stockman et al., 2013; Wadsworth and Records, 2013; Bergmann and Stockman, 2015; Ba and Bhopal, 2017; Callan et al., 2021; Forkus et al., 2021; Lim et al., 2022; Spencer et al., 2023). In addition, reviews comparing survivors to controls found that survivors are more likely to practice non-monogamy and to have a greater lifetime number of sex partners, with one review finding small to medium-sized effects (Messman-Moore and Long, 2003; Gielen et al., 2007; Meyer et al., 2011; Finneran and Stephenson, 2013; Seth et al., 2013; Stockman et al., 2013; Forkus et al., 2021). In contrast, three reviews found no association of sexual violence history with decreased safe sex practices (Buller et al., 2014), trading sex for money or drugs (Finneran and Stephenson, 2013), non-monogamy (Wadsworth and Records, 2013) or lifetime number of sex partners (which also includes number of sex partners prior to sexual violence; Finneran and Stephenson, 2013).

Additionally, reviews report an association with a higher frequency of having sex (e.g., being six times more likely to have had sex more than 10 times in the past 3 months compared to controls; Maman et al., 2000; Messman-Moore and Long, 2003; Stewart et al., 2019), a lower sexual frequency and avoidance of sexual relationships with 30.0%–85.0% of survivors reporting aversion to and avoidance of sexual activity for at least 6 months (Van Berlo and Ensink, 2000; Madowitz et al., 2015; Stewart et al., 2019). No significant association of ASA with sexual frequency is reported in one review (Van Berlo and Ensink, 2000).

Alongside changes in sexual frequency, more than one in 10 to nearly six in 10 survivors report sexual difficulties (e.g., sexual dysfunction, decreased sexual satisfaction, decreased sexual desire, decreased sexual pleasure) with reviews finding small to medium-sized effects when comparing survivors, controls, and survivors of other trauma types (Campbell et al., 2000; Van Berlo and Ensink, 2000; Coker, 2007; Ba and Bhopal, 2017; Pulverman et al., 2019; Dame et al., 2020; Godier-McBard and Jones, 2020; Pulverman and Creech, 2021). However, two reviews found no difference between survivors and (military) controls regarding sexual wellbeing (Peterson et al., 2011; Pulverman et al., 2019). Two reviews mention the presence of sexual identity struggles among survivors (i.e., how an individual expresses his/herself sexually; for female survivors see Kouyoumdjian et al., 2013; for male survivors, see Peterson et al., 2011). Reviews also document that female survivors report powerlessness regarding engaging in sexual self-care, difficulties in rejecting unwanted sexual advances, and engaging in condom use negotiation, and decreased sexual assertiveness (Campbell et al., 2000; Maman et al., 2000; Meyer et al., 2011; Dillon et al., 2013; Kouyoumdjian et al., 2013; Stockman et al., 2013; Davis et al., 2023; Spencer et al., 2023).

(Sexual) revictimization

Sexual violence survivors also show an increased likelihood of becoming *revictimized.* Survivors vs. controls are 11 times more likely to experience intimate partner violence (Campbell et al., 2000; Maman et al., 2000; Meyer et al., 2011; Scoglio et al., 2021; Vitek and Yeater, 2021; Spencer et al., 2023). In addition, they have a greater likelihood of becoming sexually revictimized with a prevalence rate of 47% among adolescent survivors (Messman-Moore and Long, 2003; Classen et al., 2005; Walker et al., 2017). Taken together, overwhelming evidence supports that sexual violence is associated with risk for various types of individual psychopathology, including PTSD, anxiety, and affective disorders as well as academic and occupational impairment, elevated psychological distress, suicidality, substance use and sexual changes, including sexual risk behavior, sexual avoidance, and sexual dysfunction and revictimization.

Negative interpersonal changes

A total of 15 reviews investigate the association of sexual violence with negative interpersonal changes including three reporting on *general social changes*. As such, sexual violence is shown to be associated with social isolation (Kahsay et al., 2020; Rani et al., 2022; Davis et al., 2023). In addition, it was found that 10.0%–60.0% of survivors report social dysfunction (Ba and Bhopal, 2017) and that 66.0%–75.0% report distrust of others, 20.0% report withdrawal from social activities and 80.0% made social changes (e.g., joining a religious group, joining delinquent peer groups, avoiding areas; Peterson et al., 2011). In addition, SV survivors report experiencing interpersonal problems, including problems with peers and family (Messman-Moore and Long, 2003; Dillon et al., 2013; Godier-McBard and Jones, 2020; Kahsay et al., 2020; Spencer et al., 2023). Three reviews evaluated the impact of ASA on ongoing *intimate relationships. One* of these reviews focused on war-related sexual violence and found that a quarter of survivors report abandonment by their spouse (Ba and Bhopal, 2017). In addition, one review found that survivors report decreased relationship satisfaction and emotional intimacy compared to controls. Results on how sexual violence affects couple communication were inconsistent (Vitek and Yeater, 2021). Another review mentioned how survivors experienced a lower perceived control and increased feeling of powerlessness in their intimate relationships (Lim et al., 2022). An assault experience might also affect relationship initiation processes. Specifically, survivors report increased distrust in men and decreased dating behavior compared to controls (Stewart et al., 2019; Rani et al., 2022).

Three reviews suggest that having experienced sexual violence can also affect *parenting behavior* of both survivors' parents and survivors themselves. In the first review it was found that young adult survivors believe that their parents engaged in more restrictive parenting than before the disclosure (Halstead et al., 2017). The other two reviews found that survivors who are mothers terminate exclusive breastfeeding earlier compared to controls and have a lower likelihood of initiating breastfeeding (small to large effect sizes; de Souza Mezzavilla et al., 2018; Normann et al., 2020).

Altogether, the included reviews suggest that sexual violence is related to negative interpersonal changes within multiple domains and relationships. However, the evidence is limited.

Positive individual and interpersonal changes

Apart from the negative changes survivors encounter, four reviews suggest SV survivors may also report some positive changes or post-traumatic growth in the aftermath of sexual violence, as documented by four reviews (Ulloa et al., 2016; Elderton et al., 2017; Guggisberg et al., 2021; Klein and Martin, 2021). Fifty per cent of survivors report having changed a little to a great deal in the positive direction according to one review. Reported changes in this review included increased spirituality, a sense of wellbeing, improved relationships with their mothers, and more empathy toward others. However, when comparing SV survivors to individuals who lost a loved one in a motor vehicle accident, results show that SV survivors report less growth (Ulloa et al., 2016). In a second review, up to three quarter of survivors report growth in at least one of the following domains: *perception of self* (i.e., redefining themselves, more strength, recovery, enhanced self-efficacy, new possibilities), *perception of their relationship with others* (i.e., more closeness in relationships, receiving support from others, feelings of empathy toward others, engaging in social activism, helping others in similar situations), and their *outlook on life* (i.e., more appreciation of life, spiritual or religious changes, redefining priorities in life; Elderton et al., 2017). Similar themes were found in the review of Guggisberg et al. (2021).

In sum, alongside the negative individual and interpersonal changes survivors encounter after sexual violence, they might also experience changes in one or more so-called growth domains. However, one review documents that ASA may be less associated with positive changes than other forms of trauma.

Risk and protective factors

An overview of the risk- and protective factors and the associations with negative and positive changes can be found in the Supplementary Appendix C (accessible through: https://osf.io/2fkm9/?view_only=6b48853fee7f4bf6ab9ec334bd369c13).

Chronosystem factors

Twenty review studies have identified chronosystem factors associated with ASA outcomes. One of these factors is the *time since the sexual violence* occurred. Specifically, reviews document that positive and negative individual changes (e.g., the initial development of and decrease in post-traumatic stress symptoms, sexual difficulties, growth and the likelihood of becoming revictimized) occur within the first months to the first year after a sexual violence incident (Van Berlo and Ensink, 2000; Classen et al., 2005; Cook et al., 2011; Ulloa et al., 2016; Elderton et al., 2017; Dworkin et al., 2023). Similarly, one review found that sexual trauma is usually not associated with delayed onset posttraumatic stress symptoms (Galatzer-Levy et al., 2018). One meta-analysis, however, found no association of time since the sexual violence with psychopathology (Dworkin et al., 2017).

The association between *having experienced childhood sexual trauma* before the ASA (vs. not having experienced childhood sexual trauma) and outcomes is inconsistent. Whereas in two reviews no significant association between having experienced childhood sexual trauma prior to the ASA and risk for reduced wellbeing was reported (Messman-Moore and Long, 2003; Classen et al., 2005), other reviews found a direct positive association of childhood sexual trauma with decreased wellbeing including lower post-traumatic growth, more depression, anxiety, PTSD symptoms, suicidality, and interpersonal and sexual difficulties. Further, an association between having a child sexual trauma history and individual risk factors for negative ASA outcomes was identified, including self-blame and less use of adaptive coping (Messman-Moore and Long, 2003; Ozer et al., 2003; Ullman, 2004; Classen et al., 2005; Wadsworth and Records, 2013; Hellman, 2014; Elderton et al., 2017; Kennedy and Prock, 2018; Salim et al., 2022; Molstad et al., 2023). Having experienced sexual violence more than once in adulthood is also associated with a greater likelihood of negative outcomes such as PTSD symptoms, depression, suicidality, sexual dysfunction, substance use, and lower GPA (Pulverman et al., 2019; Diez-Canseco et al., 2022; Rani et al., 2022).

A chronosystem factor that has received little attention, is *normative life events*. According to a review including qualitative research with survivors, one such event that has been found to influence the occurrence and severity of changes in female survivors was the process of giving birth, with some survivors reporting that this experience amplified feelings of shame and led to feelings of disconnection or alienation from their body (LoGiudice, 2016).

Taken together, chronosystem factors such as the time since the sexual violence may influence changes following sexual violence. The evidence for the influence of additional traumas or normative life events is either mixed or limited but seems to be consistent with work in the trauma field more broadly regarding the cumulative impact of multiple traumatic experiences.

Individual factors

In the next section, we will review individual factors identified in 32 reviews as being related to sexual violence sequelae, beginning with sociodemographic characteristics.

Sociodemographic characteristics

Sociodemographic characteristics identified in the included reviews are *gender, ethnicity, age, education level*, and *sexual identity*.[2] The findings regarding *gender, ethnicity*, and *age* are rather contradictory. Some reviews suggest no gender differences with regard to a broad range of changes (Tolin and Foa, 2008; Dworkin et al., 2017; Bows, 2018). Other reviews, however, found gender differences including more PTSD symptoms, depression and anxiety symptoms, substance use, disordered eating, and high-risk sex among survivors who identified as women, and more distress, paranoia, hypomania, psychopathic traits, schizophrenia, sexual dysfunction, substance use (disorders), impairment in academic functioning, and suicidal behavior in survivors who identified as men (Peterson et al., 2011; Ba and Bhopal, 2017; Langdon et al., 2017; Godier-McBard and Jones, 2020; Forkus et al., 2021; Klein and Martin, 2021; Nicholas et al., 2022). Although not compared to women, men report concerns about their male gender role (i.e., behavior that is regarded as stereotypically male) after being victimized. In addition, hyper-heterosexual behavior and concerns about their sexual orientation are reported as well (Peterson et al., 2011; Godier-McBard and Jones, 2020).

The same pattern of inconsistency is found for ethnicity: a few reviews have found no differences among people who identify as White, Black/African American, Latine, and Native American with respect to overall psychopathology (Dworkin et al., 2017) and number of sex partners (Seth et al., 2013). Meanwhile, other reviews show that individuals who identify as White (vs. Black/African American) report more PTSD-symptoms (Wadsworth and Records, 2013) and that belonging to an ethnic minority group (vs. majority groups) is associated with more psychopathology (Hellman, 2014; Klein and Martin, 2021), but also with more post-traumatic growth (Ulloa et al., 2016; Elderton et al., 2017).

Differences among younger and older survivors are consistently reported in some reviews. However, the direction of these differences varied, with some reviews demonstrating increasing age to be a protective factor against negative changes (Ulloa et al., 2016; Dworkin et al., 2023) and a younger age to be a risk factor for negative changes (Hellman, 2014; Pulverman et al., 2019), and other reviews demonstrating the opposite pattern (Cook et al., 2011; Ulloa et al., 2016; Salim et al., 2022). Finally, three reviews show that holding a sexual minority identity (vs. heterosexual identity) is associated with greater psychopathology, and one review reported that having a *lower education level* relates to greater posttraumatic growth (Hellman, 2014; Ulloa et al., 2016; Klein et al., 2022; Salim et al., 2022).

Cognitive factors

Cognitive factors such as *self-blame* and *perceived control* are also associated with changes following sexual violence. Survivors who report more self-blame related to the sexual violence report more negative changes such as depression, PTSD symptoms and social withdrawal, and less post-traumatic growth compared to

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[2] Ethnicity and sexual identity were placed within the individual level as belonging to a certain minority group is an individual factor. Nevertheless, the authors acknowledge that the reason why ethnicity and sexual identity are risk factors are due to experiences with racism and/or discrimination (Wadsworth and Records, 2013; Ching et al., 2018). Experiences with racism and discrimination have as to our knowledge not yet been included in any reviews.

survivors who report less self-blame (Ullman, 1999; Van Berlo and Ensink, 2000; Hellman, 2014; Gong et al., 2019). In addition, it was found that survivors who experience more *perceived control* over their life and their recovery report more post-traumatic growth and less distress, compared to survivors who experience less perceived control (Ullman, 1999; Campbell et al., 2000; Hellman, 2014; Ulloa et al., 2016; Elderton et al., 2017).

Personality traits

There is some limited evidence that personality traits may play a role in the occurrence and intensity of certain changes following sexual violence. Three reviews on post-traumatic growth and resilience found that higher levels of traits such as hardiness and a greater ability to adapt to life changes (Ulloa et al., 2016; Elderton et al., 2017; Knight et al., 2022) combined with higher neuroticism levels are associated with more growth and less depression in survivors (Ulloa et al., 2016); whereas survivors who score higher on neuroticism, but not hardiness, report less growth (Ulloa et al., 2016). Additionally, having a sense of humor and having a positive outlook on life are shown to be associated with reporting finding meaning following the assault (Knight et al., 2022; Rani et al., 2022).

Coping behaviors

Multiple reviews highlight the importance of coping behaviors in the aftermath of the assault. Relying more on active coping strategies that involve working to solve the problems associated with the sexual violence or restructuring negative cognitions are associated with less distress and more post-traumatic growth (Ullman, 1999; Ulloa et al., 2016; Elderton et al., 2017; Pebole et al., 2021; Sinko et al., 2022), whereas relying more on avoidant coping strategies (i.e., coping strategies that serve to avoid emotions and cognitions related to the sexual violence) is associated with more distress, more high-risk sexual behavior and less post-traumatic growth (Ullman, 1999; Gielen et al., 2007; Hellman, 2014; Elderton et al., 2017; Kennedy and Prock, 2018). The effect of avoidant coping strategies is, however, not unequivocally negative as it depends on time since the sexual violence happened (as time passes avoidant coping becomes increasingly associated with more distress; Ullman, 1999).

Mental health

Multiple reviews show how pre-existing and post-assault mental health difficulties can affect other outcomes. For instance, post-traumatic stress and depression symptoms and broader psychological distress are associated with decreased sexual functioning, greater impairment in survivors' self-concept and difficulties in academic functioning (Pulverman et al., 2019; Bird et al., 2021; Klein and Martin, 2021; Kouvelis and Kangas, 2021). In addition, pre-existing alcohol abuse issues are associated with more PTSD symptoms 3 months following the assault, whereas alcohol use post-assault assault is associated with an increased likelihood of revictimization (Langdon et al., 2017; Gong et al., 2019).

In sum, the included reviews show that multiple individual factors are correlated with psychosocial changes following sexual violence. Although the evidence regarding most socio-demographics is inconclusive and the role of personality was not extensively investigated in the included reviews, many reviews have shown the importance of cognitive factors, coping, and mental health difficulties as risk or protective factors for negative and positive individual changes following sexual violence.

Assault-related factors

Assault-related risk and protective factors are documented in 12 reviews and include assault severity and perpetrator identity (gender and prior relationship of the survivor with the perpetrator).

Results among survivors show greater *assault severity* (e.g., completed rape vs. attempted rape, threat of using physical force, using physical force, being injured, actual life-threat, presence of a weapon, number of perpetrators) to be associated with more negative changes (Ullman, 2004; Classen et al., 2005; Feldner et al., 2007; Dworkin et al., 2017). However, results for sexual changes are inconsistent according to one review: penetrative sexual violence (vs. non-penetrative sexual violence) is associated with sexual difficulties, whereas the use of physical force (vs. no use of physical force) is not (Van Berlo and Ensink, 2000). With regard to positive changes, results are not unequivocal as one review reports a significant positive association between assault severity and positive changes (Ulloa et al., 2016) and another review documented no significant association between sexual assault severity and positive changes (Elderton et al., 2017).

Evidence regarding the role of *alcohol intoxication* during the assault is mixed according to one review. Both cross-sectional and longitudinal empirical studies found intoxicated survivors reported greater PTSD symptomatology, a longer recovery time, and greater substance use than survivors who were sober during the assault, whereas other studies found the opposite pattern or no significant differences between intoxicated and sober survivors (Gong et al., 2019).

Whether or not type of *prior relationship to the perpetrator* is a risk or protective factor for negative or positive changes following sexual violence is inconclusive. Four reviews suggest that having a prior (intimate) relationship to the perpetrator is not associated with negative or positive changes (Van Berlo and Ensink, 2000; Classen et al., 2005; Ulloa et al., 2016; Dworkin et al., 2017; Sparrow et al., 2017). However, in one review, sexual violence by a known (vs. unknown, identity not further specified) perpetrator was associated with sexual dysfunction, but not with changes in sexual frequency (Van Berlo and Ensink, 2000). One review found differential associations between sexual violence perpetrated by a current partner, past partner, or non-partner on PTSD-symptoms, stress, and dissociation. These patterns also differed among survivors who identified as White and survivors who identified as Black/African American, with non-partner sexual violence being unrelated to negative changes among White survivors and sexual violence by a past partner being unrelated to negative changes among Black survivors (Wadsworth and Records, 2013). For male survivors, there is some evidence that risk for negative outcomes may differ for those assaulted by male and female perpetrators. Specifically, those assaulted by male perpetrators may be more likely to experience distress, sexual identity confusion, and difficulties with trust as compared to those assaulted by female perpetrators (Peterson et al., 2011; Godier-McBard and Jones, 2020).

Overall, the reviews support that sexual assault severity is a risk factor for experiencing negative changes. How assault severity relates to positive changes and whether relationship with the perpetrator, the perpetrator's gender, and the survivors' substance use during the assault should be considered as a potential risk factor remains unclear.

Micro/meso system factors

Micro/meso system factors are identified in 17 reviews. The most extensively evaluated factor at the micro/meso system level is *social support.* Survivors who possess a supportive social network and are able to rely on this network report fewer negative changes post-assault (Ozer et al., 2003; Ullman, 2004; Wright et al., 2022). Separate from general social support, receiving more supportive reactions from others when disclosing the assault (e.g., listening, emotional support) is associated with more growth and resilience and less negative psychosocial changes, including PTSD and depression—either directly or indirectly through greater survivor reliance on adaptive coping strategies—than receiving fewer supportive reactions (Ullman, 1999; Van Berlo and Ensink, 2000; Hellman, 2014; Ulloa et al., 2016; Elderton et al., 2017; Halstead et al., 2017; Knight et al., 2022; Sinko et al., 2022). Receiving support appears to be especially important in the first 6 six months following the assault (Ullman, 1999). On the contrary, survivors who receive more unsupportive reactions when they disclose (e.g., disbelief or blame) report more negative psychosocial changes than survivors who receive fewer unsupportive reactions. This association is also mediated through greater survivor reliance on maladaptive coping strategies (Ullman, 1999; Hellman, 2014; Halstead et al., 2017; Kennedy and Prock, 2018; Gong et al., 2019; Salim et al., 2022; Wright et al., 2022). However, a recent meta-analysis showed that both supportive and unsupportive reactions are associated with greater psychopathology. According to that same meta-analysis, reactions that are generally considered as supportive in the literature have a differential effect compared to reactions that are actually *perceived* as being supportive by survivors. Specifically, perceived supportive reactions are found to be negatively associated—both cross-sectionally and prospectively—with psychopathology (Dworkin et al., 2019).

The *relationship of the survivor with the support provider* is differentially associated with psychosocial changes in response to disclosure of sexual violence. Although supportive reactions from family, friends and intimate partners following sexual violence disclosure are mostly perceived as helpful, they do not all relate to psychosocial adjustment. Receiving emotional support and other supportive reactions from friends is associated with better recovery than receiving emotional support from others (Ullman, 1999). Unsupportive reactions from family, friends and intimate partners are associated with negative psychosocial changes, of which unsupportive reactions from an intimate partner are associated with more negative psychosocial changes than unsupportive reactions from others (Ullman, 1999; Kennedy and Prock, 2018).

One review documented the *quality of the relationship* with family and one's intimate partner as a risk or protective factor for experiencing psychosocial changes following sexual violence. This review found that higher family closeness, defined as the emotional connectedness between family members (Manzi and Brambilla, 2014), is associated with decreased anxiety and depression symptoms 6 months after the sexual violence occurred, but not immediately after the event. In contrast, relationship quality with an intimate partner immediately after the assault is not associated with decreased anxiety and depression symptoms (Ullman, 1999).

Also, *living arrangements* (living alone, with partner or with family) and *relationship status* is a potential risk or protective factor. Survivors who were living with their family (vs. alone or with an intimate partner) at the time of the sexual violence report less PTSD-symptoms (Ullman, 1999). Marital status itself is not associated with negative individual changes (Ullman, 1999), but is negatively related to post-traumatic growth (Ulloa et al., 2016). Additionally, single survivors (vs. those in a relationship) report having more sex partners and more high-risk sex (Gielen et al., 2007; Seth et al., 2013).

Altogether, many reviews confirmed the importance of the absence and/or presence of (the perception of) support from close and intimate others as affecting psychosocial positive and negative changes following sexual violence.

Exosystem factors

Ten reviews report on the role of *formal support providers* such as law enforcement, medical personnel, and police personnel, in affecting survivor outcomes. Survivors who do not seek treatment report more suicidality (Peterson et al., 2011). Those who do seek treatment and those who receive supportive reactions from formal support sources experience fewer negative changes and more positive changes following sexual violence than survivors who receive fewer supportive reactions from formal support (Ullman, 1999; Ulloa et al., 2016; Elderton et al., 2017; Knight et al., 2022; Sinko et al., 2022; Wright et al., 2022). Conversely, unsupportive reactions from formal support providers are associated with negative psychosocial changes including PTSD and distress (Kennedy and Prock, 2018). Feeling pressured to reveal details about the assault to formal support providers is related to greater distress as well (Alessi et al., 2021). The potential effect of supportive reactions may differ depending on the source. More specifically, receiving more supportive responses from healthcare providers is strongly associated with psychosocial adjustment whereas responses from police were unrelated to adjustment (Ullman, 1999). Whether reactions that are perceived as being supportive by survivors have differential effects than those labeled as supportive in the literature remains unclear (Dworkin et al., 2019).

In sum, formal support providers' reactions are associated with both negative and positive changes survivors experience following sexual violence.

Macrosystem factors

Reviews explicitly including risk or protective macrosystem factors are nonexistent. Three reviews addressed the potential impact of certain macrosystem factors without including empirical studies on the association between macrolevel factors and change post-assault.

The potential impact of *gender norms* is mentioned in one review of outcomes among male survivors (Peterson et al., 2011). This review suggests that male survivors may sometimes worry about their sexual orientation and gender role reputation—due to societal male gender norms and ideas about masculinity—and therefore may underreport some negative changes (e.g., depression symptoms or decreases in sexual desire) while overreporting others (e.g., anger, alcohol use). Additionally, existing *rape myths* (i.e., stereotypical but false beliefs about sexual violence and survivors) in society are believed to affect survivors' cognitions and behaviors, as suggested by two reviews (Hellman, 2014; Kennedy and Prock, 2018). Although both reviews acknowledge the existence of rape myths and their potential impact on survivors, they do not include empirical research on the association between rape myths and changes following sexual violence.

Thus, reviews suggest that macrosystem factors may play a role in the impact of sexual violence, but empirical research on their impact is not available in the reviews.

Discussion

The primary goal of this meta-review was to provide an ecological approach to understanding the impact of sexual violence by synthesizing the literature on (1) negative and positive individual and interpersonal changes that may occur following sexual violence, and (2) risk and protective factors at different ecological levels associated with these changes. Based on our thorough thematic analysis of the results of 92 systematic reviews, the following main conclusions can be drawn.

First, sexual violence is associated with many *negative individual and interpersonal changes*. Specifically, the association between sexual violence and trauma- and stress related disorders was investigated by a multitude of reviews and found to be consistent. Although not consistently established in all reviews, many found associations of sexual violence with risk for mood disorders, anxiety, substance use, suicidality, sexual dysfunction, and revictimization. Potential reasons for these inconsistencies may be the use of different sample types (e.g., clinical samples, community samples, no [appropriate] comparison groups) within and across review studies, different time frames during which outcomes were measured (e.g., some studies investigated outcomes immediately following the assault whereas in other studies there is an extended time between the assault and assessment of outcomes) and/or differences in how ASA is assessed across studies. Other potential forms of psychological distress and psychopathology following sexual violence are altered self-perceptions, disordered eating, personality disorders and—although not consistently found—somatic symptoms. A smaller proportion of reviews report on interpersonal changes, such as social isolation, distrust, interpersonal difficulties, and changes within relationships with significant others including friends, intimate partners, family, children, and parents, following sexual violence.

Second, alongside these negative changes, *positive changes* can occur following sexual violence. Although only a few reviews have investigated these positive changes, the results suggest that positive changes may occur in self-perceptions, the survivor's relationship with others and in the survivor's outlook on life. However, these positive changes may be less common following ASA as compared to other forms of trauma.

Third, experiencing changes following sexual violence is influenced by factors at multiple ecological levels. Many reviews document consistent significant associations between chronosystem (including time since the sexual violence), individual level (including self-blame, perceived control, and coping strategies), assault-related (including assault severity), micro/meso system (including [the absence] of a social network and (the perception of) (un)supportive reactions following disclosure), exosystem (including [un]supportive reactions from formal support providers) factors and changes following sexual violence. Macrosystem factors that are associated with changes following sexual violence remain unexplored in the included reviews, however.

Fourth, the current meta-review suggests that the aftermath of sexual violence involves a complex *interplay* of risk and protective factors in affecting survivor's recovery following sexual violence. For instance, the association between receipt of negative disclosure reactions and negative changes following sexual violence is (partially) mediated through self-blame and coping strategies. That is, receiving unsupportive reactions can lead to greater reliance on avoidant coping strategies and self-blame, exacerbating distress. The included reviews also document many associations between risk and protective factors in support of this interplay, but these associations fall outside the scope of this meta-review.

Recommendations for practice

Findings of the current meta-review document the significant individual and interpersonal costs of sexual violence for the survivor. By adopting an ecological approach, the current study has identified a number of risk and protective factors documented in the research literature as relevant in understanding the impact of sexual violence. This evidence might be highly informative for practitioners working with survivors. For example, our findings support that a detailed assessment of the impact of sexual violence should not only focus on trauma and mood disorder (symptoms) but should also include a screening for sexual and interpersonal difficulties. In addition, repeated assessments of the impact of sexual violence are needed and should be scheduled throughout the 1-year time-window following sexual violence, as most psychosocial changes occur in the first months to the first year following sexual violence. Alongside the focus on potential changes following sexual violence, assessment efforts should also be directed at exploring risk and protective factors for survivors. For instance, assessing survivors' feelings of control, the extent to which they blame themselves, and the strategies they utilize to manage the assault, as well as the presence of an (un)supportive (in)formal network are vital in predicting survivors' (mal)adaptation. In the same way, assessment of how these support figures are dealing with the assault is important to identify whether survivors have interpersonal resources to assist them in their recovery. In line with this assessment, an intervention—tailored to the specific needs of each survivor—could be developed to reduce the impact of risk factors and to develop resources or to capitalize on existing ones. This intervention should aim to decrease negative individual and interpersonal changes following sexual violence and increase positive changes by, among other things, helping survivors regain a feeling of control over their life and their recovery, making them question their self-blaming cognitions and identifying and developing adaptive coping strategies. In addition, practitioners should support survivors' social network members in coping adaptively with the sexual violence and supporting the survivor. Finally, sexual violence awareness should be included in training of practitioners. A detailed assessment and intervention tailored to the survivors' needs can only take place when giving survivors the opportunity to talk about sexual violence and by asking whether they have had unwanted sexual experiences. In addition, it is vital to educate all types of formal support providers on how to react supportively to a sexual violence disclosure.

Strengths and limitations

Conducting a meta-review allowed us to examine our broad research questions regarding the negative and positive individual and interpersonal changes following sexual violence, as well as the risk/protective factors associated with these changes (Pollock et al., 2020). Given the relevance of the multiple risk and protective factors as indicated by our review, adopting an ecological approach in research on sexual violence is necessary to advance our understanding. This meta-review is one of the few adopting such a perspective on the topic of sexual violence and thereby provides us with a broad overview of the literature. As such, it synthesizes many existing reviews and may aid in the development and adaptation of new and existing theories (Hunt et al., 2018).

However, this study also has its limitations. First, given the meta-review approach, detailed descriptions of the post-assault experiences of survivors is lacking. In addition, despite our focus on systematic reviews, this methodology runs the risk of not being exhaustive. Due to the immensely large number of fragmented studies, not every single study on this topic is documented in one of the included reviews. The list of potential changes and risk and protective factors described in the current review might, therefore, be incomplete. Moreover, most reviews include published studies only. Consequently, the current review may be biased as well. Further, our meta-review was based on a search of three major databases. Only including three databases might have limited the number of relevant reviews found. In addition, it is possible that our search terms were not broad enough to be able to find reviews that explicitly included research on the impact of macrolevel factors. Another limitation relates to the well-known problem of inconsistent definitions/assessments of sexual violence in research, leading to an inability to directly compare results across studies and reviews. Another limitation concerned challenges in categorizing some variables. As an example, while sexual identity was categorized as an individual factor, negative reactions from others toward sexual minority groups (microsystem factor) or discriminatory policies and practices toward sexual minority groups (macrosystem factor) are likely to affect the changes sexual minority survivors experience following sexual violence. Another typical difficulty in a meta-review is duplicate information because review studies on the same topic may include the same individual studies. Nevertheless, almost every single included review contributes to the current meta-review with unique empirical studies. By including all the published reviews, we are able to provide a more comprehensive snapshot of the literature than a single review which tends to have a narrower focus. In addition, by identifying areas that have received relatively little research attention, we are able to identify fruitful avenues for future research. The meta-review results also depend on the methods used and study quality of the individual reviews. It is only possible to include detailed and contextual study information in a meta-review based on the methods used to analyze empirical study findings in included reviews and how they present them (e.g., meta-analysis, narrative summary, providing an overview of all included empirical studies). When important information, such as effect sizes, is missing in individual reviews, overall statements on the impact of sexual violence can only be made with caution. A final limitation is that the current review cannot make strong claims about causality. Most empirical studies included in the reviews are non-experimental, cross-sectional or qualitative in nature. Moreover, many empirical studies on sexual violence may be biased as it is not known how survivors who choose to participate in research studies differ from survivors who choose not to participate.

Suggestions for future research

The sometimes-inconsistent results regarding the changes following sexual violence suggest that more uniformity in sexual violence research, and specifically in reviews, is warranted. Reviews should clearly state what their definition of sexual violence is and how sexual violence was assessed in the included studies. In addition, more meta-analyses are necessary to review how sample types and time since the sexual violence affects outcomes and their relations with risk and protected factors. Furthermore, the current meta-review shows that not all existing reviews are of reasonable quality. Although the quality of more recent reviews has increased, future reviews should carefully follow review guidelines during the study selection and data extraction phase, including transparent communication on study selection and a rigorous extraction of all important methodological and statistical information on the included studies.

Of all changes and risk and protective factors included in the reviews, some received relatively little research attention. For instance, only a minority of the included review studies evaluated *interpersonal changes* following sexual violence. Every individual is imbedded in a social network to some extent which is of importance for our wellbeing, as is also illustrated by the impact of disclosure reactions on survivors' recovery. Consequently, quantitative and qualitative research on interpersonal changes and dynamics between survivors and individuals in their social network is warranted. The same is true for positive changes following sexual violence. Research on positive changes and their antecedents is important to understand survivors' recovery processes. Additionally, risk and protective macrosystem factors are not included in the existent review literature. This suggests that empirical studies on this topic are scarce.

Accordingly, research on risk and protective macrosystem factors should be conducted. When we can identify if and how macrosystem factors play a role in survivors' recovery, this information can be used in both survivor intervention programs and efforts for creating societal changes with regard to how survivors are perceived. Finally, the included reviews demonstrate that the empirical research literature on sexual violence and its aftermath is still fragmented. However, the current meta-review supports that there is a complex interplay between factors at multiple levels of the social ecology in affecting adjustment among survivors. Therefore, taking an ecological perspective in future reviews and empirical studies is essential to delineate the multiple influences on sexual violence survivors' recovery.

Conclusion

This meta-review compiles the evidence from existing reviews on the impact of sexual violence. It provides us with a comprehensive overview of the negative as well as potential positive individual and interpersonal changes that survivors of sexual violence experience, and the risk and protective factors for negative and positive changes following sexual violence. Our work sheds light on what is still unknown about risk and protective factors following sexual violence and may serve as a solid knowledgebase for researchers as well as clinicians working with survivors.

Data availability statement

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

Author contributions

LV, KU, and HL contributed to the initial idea for the study. DS developed search terms, carried out the search, created the database, conducted a thematic analysis, and wrote the first draft of the manuscript. DS and LH screened titles, abstracts and individual papers, and conducted a quality assessment on the individual papers. LH, HL, GL, KU, and LV revised the manuscript multiple times. All authors contributed to manuscript revision, read, and approved the submitted version.

Conflict of interest

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

Publisher's note

Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2023.1032408/full#supplementary-material

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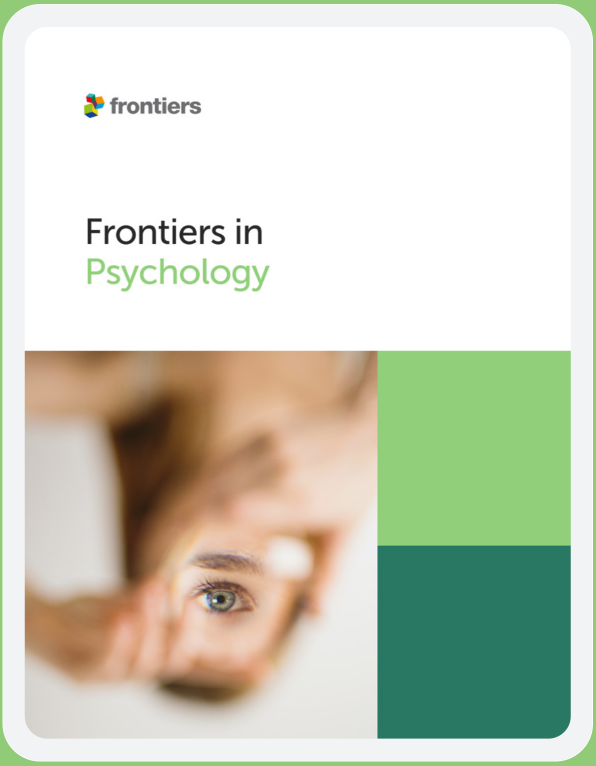

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