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Conformity to gender norms and denial of LGBTQ+ discrimination: The mediating role of anti-LGBTQ+ conspiracy beliefs

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ABSTRACT

Conspiracy theories about the LGBTQ+ community are gaining increasing popularity and resulting in negative attitudes and discriminatory behaviours. Traditional and conservative views about gender are also highly associated with such negative consequences for sexual minorities, as a higher endorsement of anti-LGBTQ+ conspiracy beliefs (CBs). We conducted two studies among Italian cis heterosexual men and women to explore the relationships among the variables of interest. In Study 1 ($N = 493$), we investigated whether the relationship between conformity to traditional gender norms and denial of LGBTQ+ discrimination might be mediated by antiLGBTQ+ CBs. In Study 2 ($N = 1419$), we experimentally manipulated conformity to traditional gender norms and included the emotional response to the manipulation as another significant mediator to investigate the abovementioned relationship further. Through a mediation analysis, we found that anti-LGBTQ+ CBs mediate the positive relationship between conformity to traditional gender norms and denial of LGBTQ+ discrimination. Moreover, we found that confirming participants' adherence to traditional gender norms is associated with lower denial through lower negative emotions and lower anti-LGBTQ+ CBs. Results show how anti-LGBTQ+ CBs may be part of the psychological mechanism explaining how traditional and conservative worldviews might translate as harmful consequences for the LGBTQ+ community.

1. Introduction

In recent years, in Italy, the LGBTQ+ community has been facing mounting and harsh social hostility, marked by the growing set of anti-LGBTQ+ political decisions and actions carried out by the country's government. According to the most recent Annual Review of ILGA Europe (2025), Italy keeps ranking among the lowest positions, with significant setbacks in legal protection and social recognition of LGBTQ+ human rights, combined with a sharp rise in hate speech and hate crimes. One of the most emblematic examples is the fiery political debate concerning the "DDL Zan", a bill aimed at expanding protections against discrimination based on sex, gender, sexual orientation, and gender identity (Salvati, Pellegrini, De Cristofaro, & Giacomantonio, 2024). Despite its clear intent to safeguard the existence of vulnerable groups, the bill faced substantial opposition from conservative parties. They claimed the proposed legislation posed a threat to freedom of speech, seeking to impose the so-called 'gender ideology', allegedly designed to erase the male and female gender identities. Similar arguments have also been used to oppose the introduction of sexual and affective education in schools, portrayed as opportunities used to indoctrinate children with 'gender theories' (ILGA Europe, 2025). The same ideological stance resurfaced when Italy refused to sign a declaration promoting the implementation of European policies in favour of LGBTQ+ rights, leaving the country's legislative framework below European standards in contrast to intolerance and discrimination against LGBTQ+ people (Mijatović, 2023). Again, Minister of Family Eugenia Roccella claimed this was an attempt to disseminate 'gender ideology' among the population and to deny the "inherent reality of biological sex" (Ferrero, 2024). Even more recently, the right-wing governing party Brothers of Italy proposed a bill that further criminalizes the already existing prohibition on surrogacy, ostensibly aiming at promoting and defending traditional family values. The Italian Senate passed the law, declaring it a universal crime (usually applicable to crimes like genocide, human trafficking, or other offences that pose a

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threat to human fundamental rights) and approving harsher penalties in fines and years of imprisonment for those who seek this practice abroad (Roberts, 2024).

These examples illustrate how recent Italian political discourse has been increasingly relying on LGBTQ+ conspiracy theories. They are used, not merely to express ideological disagreements, but as a tool to pursue specific political agendas and shape crucial policies on LGBTQ+ rights (Adam, 2020; Douglas & Sutton, 2023), implying many harmful consequences for the well-being of LGBTQ+ people and intergroup dynamics (Jolley, Mari, & Douglas, 2020; Jolley, Meleady, & Douglas, 2020; Jolley et al., 2022; Panerati & Salvati, 2025). These narratives usually appeal to the need to protect traditional family and gender values and stress the importance of endorsing traditional masculine and feminine norms (Salvati, Passarelli et al., 2021). Conformity to societal gender norms and roles also leads to negative and more discriminatory attitudes towards sexual minorities, like negative attitudes, prejudice, and downplaying or denying the existence of discrimination against them (Falomir-Pichastor et al., 2019; Herek & McLemore, 2013; Piumatti & Salvati, 2020).

Against this backdrop, the current research aims to further investigate these lines of research by exploring the potential mediating role of anti-LGBTQ+ conspiracy beliefs in the relationship between conformity to traditional gender norms and denial of LGBTQ+ discrimination. We aim to understand whether and how the abovementioned pattern may change when participants' conformity to conventional gender norms is experimentally manipulated.

1.1. Conformity to gender norms

Heteronormative contexts are based on the idea that gender is stable, well-defined, and binary – i.e. defined by two clear and separate categories, and they predominantly rely on people's conformity to societal gender norms (Closon & Aguirre-Sánchez-Beato, 2018; Herek, 2007). Gender norms and roles indicate what attitudes, features, and behaviours are acceptable for men and women (Mahalik et al., 2003, 2005). They are unwritten expectations that reflect the values of the dominant and privileged groups. People learn their ingroup's gender norms through socialization processes and then adhere to them to build their identities, finding a sense of belonging where prescribed (Bourguignon et al., 2018; Light, 2022; Thompson & Pleck, 1986).

Literature has explored how conformity to traditional gender norms – especially among men – may have negative consequences for minority groups, perceived as violating heteronormative societal standards (Gulevich et al., 2018). Higher endorsement of societal gender norms may lead to higher levels of benevolent sexism, reduced prosocial behaviour, and increased negative attitudes towards the LGBTQ+ community (Berke et al., 2021; Carter et al., 2019; Falomir-Pichastor et al., 2019; Leone et al., 2017). Conformity to societal gender norms in heterosexual people (particularly men) is related to higher sexual prejudice, homophobia, and sexual discrimination towards individuals who fail to conform to those social gender prescriptions (Dessel et al., 2017; Light, 2022; Salvati et al., 2016; Wellman & McCoy, 2014).

People who adhere to general conventional societal norms may be more inclined to believe conspiracy theories that reinforce their existing beliefs about gender and sexuality and frame the LGBTQ+ community as a threat to traditional values (Grzesiak-Feldman, 2015; Salvati, Pellegrini, De Cristofaro, Costacurta, & Giacomantonio, 2024; Sweigart, 2022). Confronting LGBTQ+ people, who defy and violate societal gender norms, might in fact challenge traditional worldviews and destabilize people's identities (Salvati et al., 2016). Specifically, gender identity is intrinsically precarious because it concerns one's sense of the self in relation to the social world, and similar circumstances can question it (Misra, 2021). Conspiracy beliefs may be a useful coping strategy for reaffirming one's identity and dissolving uncertainty (Adam-Troian et al., 2023; Graeupner & Coman, 2017; Landau et al., 2015). People who strictly conform to societal gender norms may support anti-LGBTQ+ conspiracy beliefs to maintain and reinforce their traditional worldviews (Adam-Troian et al., 2021; Moulding et al., 2016; Salvati, Pellegrini, De Cristofaro, Costacurta, & Giacomantonio, 2024; Salvati, Pellegrini, De Cristofaro, & Giacomantonio, 2024). These findings seem to suggest that we could expect a similar relationship considering conformity to societal gender-specific norms.

Thus, we advance that a possible mechanism that might explain the relationship between conformity to traditional gender norms and LGBTQ+ discrimination (i.e., denial of discrimination) is an increased endorsement of anti-LGBTQ+ conspiracy beliefs.

1.2. Anti-LGBTQ+ conspiracy beliefs

Anti-LGBTQ+ conspiracy beliefs (CBs) refer to a series of beliefs in a specific set of conspiracy theories (i.e., the existence of gender ideology, gay affluence/lobby, gay agenda) involving the idea that the LGBTQ+ movement is a malevolent group secretly plotting to achieve its interests, destroying traditional values, culture, and family institutions (Bettinsoli et al., 2022; Jaśkiewicz, 2024; Salvati, Pellegrini, De Cristofaro, Costacurta, & Giacomantonio, 2024).

Relevant to the present research, recent studies have found empirical evidence linking anti-LGBTQ+ CBs with different negative consequences for intergroup relations (Jolley, Mari, & Douglas, 2020; Jolley, Meleady, & Douglas, 2020). Stronger anti-LGBTQ+ CBs are associated with increased levels of negative attitudes and stereotyping, an increased denial of discrimination against the community (Mouafo, 2023; Thöni et al., 2024), lower levels of support, and fewer collective actions in favour of LGBTQ+ people (Salvati, Pellegrini, De Cristofaro, Costacurta, & Giacomantonio, 2024; Salvati, Pellegrini, De Cristofaro, & Giacomantonio, 2024). The rejection that stems from these stigmatizing and discriminatory attitudes takes a toll on the individual well-being of LGBTQ+ people, leading to constant stressful situations and an increasing risk of developing mental health problems (Thöni et al., 2024). Similar studies have demonstrated how CBs related to the LGBTQ+ community seem to be correlated with a lack of support for gay rights and a lack of awareness of subtle and overt discrimination against the community (Gkinopoulos et al., 2024; Jolley et al., 2025; Salvati, Pellegrini, De Cristofaro, & Giacomantonio, 2024).

A growing interest in the psychological dynamics that drive people to conspiracies has recently been registered. Literature suggests that people may be drawn to adopt CBs to satisfy social-psychological motives –i.e., epistemic, existential, and social needs, unmet when important changes and events occur (Douglas et al., 2019; Jolley, Mari, & Douglas, 2020; Jolley, Meleady, & Douglas, 2020; Giacomantonio et al., 2022). When important socio-political changes happen and times of crisis arise, information tends to be incomplete, inadequate, and confusing. People need to fill in the gaps of knowledge and understanding to restore a sense of control and security, as well as perceive to be capable of managing the upcoming negative emotions they may be starting to feel (Pellegrini et al., 2021). Additionally, when intergroup relationships are questioned, validating one's ingroup and maintaining a positive image in contrast to the malevolent outgroup becomes a priority (Jolley, Mari, & Douglas, 2020; Jolley, Meleady, & Douglas, 2020).

Overall, it is necessary to consider that significant changes do not always come as big, notable events (e.g., wars, pandemics, economic and political crises), but can also be constant in time and manifest themselves more subtly, such as the recent cultural changes regarding gender and sexual identities. Evidence points to how conspiracy beliefs are an appealing and easily accessible coping mechanism for managing negative emotions and reaffirming one's identity and values when facing threatening circumstances (Douglas & Sutton, 2023; Federico et al., 2018; Marchlewska et al., 2022; Mouafo et al., 2023). Here, we propose that when conformity to traditional gender norms and roles is confirmed, people may feel their identities are less questioned, less unsure, and consequently need less endorsement in CBs.

1.3. Current research and hypotheses

Acknowledging that our cultural context is structured around a binary conception of gender, where people are expected to conform to socially prescribed behaviours, attitudes, and roles based on the gender identity they were socialised into, this research aims to explore how cis-heterosexual people adhere to these expectations and whether such conformity is linked to anti-LGBTQ+ conspiracies. Two studies were built to investigate this relationship. Study 1 tested whether the already well-documented relationship between conformity to gender norms among cis-heterosexual people and negative consequences for the LGBTQ+ community, such as denial of discrimination, may be associated with anti-LGBTQ+ CBs (Berke et al., 2017, 2021; Falomir-Pichastor et al., 2019; Hunt et al., 2016; Leone et al., 2017; Salvati, Pellegrini, et al., 2021a; Salvati, Pellegrini, et al., 2021b). Based on existing literature, we predicted that the more people (both male and female participants) conform to the norms of their gender, the more they would endorse anti-LGBTQ+ CBs and, in turn, deny the existence of LGBTQ+ discrimination (Adam-Troian et al., 2020; Berke et al., 2021; Carter et al., 2019).

Study 2 expanded Study 1 by experimentally manipulating participants' perception of their adherence to masculine or feminine norms according to their own gender identity (threatening condition vs. confirming condition vs. control condition). Based on the role conspiracy beliefs play in regulating people's emotions and reaffirming their identities and set of values, we examined whether the link between the manipulated perception of conformity to gender normativity and anti-LGBTQ+ CBs may be explained by emotional responses elicited by the manipulation (Douglas & Sutton, 2023; Federico et al., 2018; Mouafo et al., 2023). Consistent with Study 1, we predicted that people (both male and female participants) assigned to the confirming (vs. threatening) condition would exhibit decreased denial of LGBTQ+ discrimination through lower negative emotions and consequently lower levels of anti-LGBTQ+ CBs (Berke et al., 2017).

2. Study 1

Study 1 investigated the relationship between conformity to gender norms, conspiracy beliefs about the LGBTQ+ community, and denial of LGBTQ+ discrimination among cis-heterosexual men and women. Specifically, we examined whether anti-LGBTQ+ CBs may account for the observed relationship between conformity to gender norms and denial of LGBTQ+ discrimination. Among male participants (Sample A), we predicted that higher conformity to heteronormative masculinity would be positively related to denial of LGBTQ+ discrimination through higher anti-LGBTQ+ CBs (H1a). Among female participants (Sample B), we predicted that higher conformity to heteronormative femininity would be positively related to denial of LGBTQ+ discrimination through higher anti-LGBTQ+ CBs (H1b).

2.1. Method

2.1.1. Participants

The sample size was defined through a power analysis for mediation models with a single mediator (Schoemann et al., 2017). We opted for conservative expected effect sizes and number of replications to achieve robust power ($r = 0.20$, $1\text{-}\beta = 0.80$, replication = 5000, draws = 20,000, Monte Carlo confidence level = 95 %). The analysis suggested a minimal sample size of 330 observations to reach a statistical power of 0.81 (*95% CI* = 0.79; 0.82). Both Sample A and B consisted of a number of participants slightly below the sample size suggested by the power analysis due to practical limitations in the recruitment process. Data collection was in fact carried out by university students enrolled in different courses, who were given the opportunity to recruit people for the research data collection in exchange for extra credits. However, the activity was entirely voluntary and not all decided to take part, limiting the number of respondents.

For purposes of this research, we needed to consider only cis-heterosexual people, so only participants who identified themselves as cisgender and heterosexual were included.

2.1.1.1. Sample A. Sample A consisted of 229 cis-heterosexual men, aged 18 to 82 years ($M = 33.75$, $SD = 15.83$), almost all Italian (96.9 %). 30.6 % of the sample were students, 66.8 % were working people, and 2.6 % were unemployed. As for educational level, 63.3 % of the sample had a high school diploma, while 25.3 % had a graduate or postgraduate qualification. 49.3 % of the participants defined themselves as non-religious, 45.0 % as Christian Catholics, and 5.7 % identified as other religions. As for political orientation, measured on a 7-point Likert scale where 1 = *far left wing* and 7 = *far right wing*, the mean was 4.48 ($SD = 1.47$).

2.1.1.2. Sample B. The sample consisted of 264 cis-heterosexual women, aged 18 to 86 years ($M = 30.64$, $SD = 13.94$), almost all Italian (99.6 %). 50.4 % of the sample were students, 47.7 % were working people, and 1.9 % were unemployed. As for educational level, 66.7 % of the sample had a high school diploma, while 25.8 % had a graduate or postgraduate qualification. 44.3 % of the participants defined themselves as non-religious, 49.6 % as Christian Catholics while the remaining 6.1 % identified in other religions. As for political orientation, measured on a 7-point Likert scale where 1 = *far left wing* and 7 = *far right wing*, the mean was 3.91 ($SD = 1.32$).

2.1.2. Procedure and measures

Participants were recruited through a snowball sampling by psychology students who were instructed to enrol non-student, adult participants in exchange for extra course credits. All the participants read the informed consent form before completing an online questionnaire, administered on Qualtrics. Some specific scales were filtered according to the gender of the participants. At the end of the questionnaire, they were thanked for their participation and a brief written debriefing was provided. The study did not provide any compensation. Ethical approval was received by [blinded for review].

The questionnaire included the measurement of some constructs related to the general topic of the research, such as participants' tendency to general conspiratorial thinking, their adherence to other conspiracy beliefs and closeness to the LGBTQ+ community. Here are reported the specific variables relevant to our core hypotheses. Variables of interest were measured as follows:

2.1.2.1. Conformity to masculine norms. Participants in Sample A were asked to respond to the 30-item Italian version of the Conformity to Masculine Norms Inventory (CMNI-SF30; Hunt et al., 2016; see also Levant et al., 2020) to measure to what extent a man conforms to traditional masculine attitudes, beliefs, and roles. The main objective of this instrument is to assess which aspects of the dominant gender ideology an individual male endorses and how he enacts them. The items consider 10 different dimensions of heteronormative masculinity, such as emotional control (e.g., "I bring up my feelings when talking to others"), violence (e.g., "I think that violence is sometimes necessary"), primacy of work (e.g., "I need to prioritize my work over other things") and heterosexual self-presentation (e.g., "I would be angry if people thought I was gay"). Responses were coded on a 5-point Likert scale, where 1 = *totally disagree* and 5 = *totally agree* ($M = 2.62$, $SD = 0.48$, $\alpha = 0.82$). A final score was obtained by averaging all the items, including reversed-scored ones so that higher scores indicated greater adherence to societal norms of masculinity.

2.1.2.2. Conformity to feminine norms. Participants in Sample B were asked to respond to the 45-item Italian version of the Conformity to Feminine Norms Inventory (CFNI-SF45; Hunt et al., 2015; see also

Parent & Moradi, 2010, 2011) to assess women's degree of conformity to culturally traditional feminine attitudes, beliefs, and behaviours. The items of this version of the instrument considered the 9 most relevant domains of norms and roles women are exposed and expected to follow, such as sweetness and niceness (e.g., "I believe that my friendships should be maintained at all costs"), domesticity (e.g., "It is important to keep your living space clean"), romantic relationships (e.g., "Having a romantic relationship is essential in life") and investment in appearance (e.g., "I spend more than 30 minutes a day doing my hair and make-up"). Responses were coded on a 5-point Likert scale, where 1 = *totally disagree* and 5 = *totally agree* ($M = 3.31$, $SD = 0.36$, $\alpha = 0.78$). A final score was obtained by averaging all the items together after reverse scoring the ones who needed it so that obtaining high scores on the CFNI scale would correspond to high levels of adherence to societal norms of femininity.

2.1.2.3. Anti-LGBTQ+ conspiracy beliefs. This variable of interest was measured with the Gender Ideology and LGBTQ+ Lobby Conspiracies (GILC) scale, a tool recently developed and validated by Salvati and colleagues (2024b) with 9 items –e.g., "An organized group of LGBT people works for more power, hiding behind the demand for more rights", "Some very powerful people want to spread 'gender ideology' in schools to indoctrinate children". Responses were coded on a 5-point Likert scale, where 1 = *totally disagree* and 5 = *totally agree* (Sample A: $M = 1.91$, $SD = 0.97$, $\alpha = 0.94$; Sample B: $M = 1.65$, $SD = 0.72$, $\alpha = 0.90$). A final score was obtained averaging all the items together after reverse scoring the ones who needed it so that obtaining high scores on the scale would correspond to high levels of conspiracy beliefs towards the LGBTQ+ community.

2.1.2.4. Denial of LGBTQ+ discrimination. We included three items to assess denial of continued discrimination against sexual minorities from Massey's (2009) tool for measuring heterosexuals' attitudes towards lesbian and gay people, namely: "Discrimination against LGBTQ+ people is no longer a problem in this country", "Society has reached the point where LGBTQ+ people and heterosexual people have equal opportunities for advancement", and "On average, people in our society treat LGBTQ+ and straight people equally". Responses were coded on a 5-point Likert scale, where 1 = *totally disagree* and 5 = *totally agree* (Sample A: $M = 2.23$, $SD = 0.94$, $\alpha = 0.78$; Sample B: $M = 1.84$, $SD = 0.80$, $\alpha = 0.74$). We computed a final score by averaging all the items, after reverse scoring the ones who needed it, so that high scores on the scale would correspond to high levels of denial.

2.2. Results

2.2.1. Correlations

Pearson's correlations are reported in Table 1. Among male participants, we observed that anti-LGBTQ+ CBs and denial of LGBTQ+ discrimination significantly increased with the increasing conformity to masculine cultural norms, with a large and medium effect size, respectively. Also, anti-LGBTQ+ CBs and denial were positively associated with each other, with a small effect size. Among female participants, we could similarly notice a positive association of conformity to feminine cultural norms with anti-LGBTQ+ CBs and denial, but with a small effect size. The correlation between anti-LGBTQ+ CBs and denial was also positive and of medium magnitude in this sample.

Table 1
Correlations between conformity to traditional gender norms (CMNI in Sample A; CFNI in Sample B), anti-LGBTQ+ CBs (GILC), and discrimination denial (DENIAL).

	1	2		1	2
1. CMNI	–		1. CFNI	–	
2. GILC	0.46***	–	2. GILC	0.18*	–
3. DENIAL	0.30***	0.18***	3. DENIAL	0.13*	0.34***

Note: Sample A ($N = 229$) is on the left side of the Table, and Sample B ($N = 264$) is on the right side of the Table. * $p < 0.05$; *** $p < 0.001$.

2.2.2. Hypothesis testing

A simple mediation analysis was conducted to test our hypotheses in both Sample A and B, using PROCESS macro for SPSS, Model 4 (Hayes & Preacher, 2014). The model includes the predictor (i.e., conformity to gender norms), the mediator (i.e., anti-LGBTQ+ CBs), and the outcome (i.e., denial of LGBTQ+ discrimination).

In Sample A (Table 2), the analysis showed that higher conformity to masculine gender norms was associated with higher levels of anti-LGBTQ+ CBs which, in turn, were associated with higher denial of LGBTQ+ discrimination. The total and direct relationships between conformity to masculine norms and denial were also significant and positive. Importantly, we found a significant and positive indirect relationship between conformity to normative masculinity and denial through anti-LGBTQ+ CBs, supporting H1a (Fig. 1).

In Sample B (Table 3), the analysis highlighted a positive relationship between conformity to feminine gender norms and anti-LGBTQ+ CBs, as well as between anti-LGBTQ+ CBs and denial. The total effect of the potential predictor on the outcome variable was significant, whereas the direct effect was positive but non-significant. Importantly, we found a significant and positive indirect relationship between conformity to normative femininity and denial through anti-LGBTQ+ CBs, confirming H1b (Fig. 2).

2.3. Discussion

These findings corroborate our line of thought that anti-LGBTQ+ CBs may account for the association between adhering to one's gender norms and denying LGBTQ+ discrimination. Among both cis-heterosexual men and women, we found that adherence to conventional gender norms was positively associated with denial of LGBTQ+ discrimination through anti-LGBTQ+ CBs (H1a and H1b). The aim of Study 2 was to replicate the results of Study 1 by using an experimental manipulation of the perception of gender norms conformity as a proxy of the construct measured before, and considering its consequent emotional response.

3. Study 2

Study 2 aimed to expand on Study 1 in two main ways. First, we built an experimental design to manipulate the perception of cis-heterosexual participants' adherence to masculine and feminine traditional norms, based on their own gender identity, by comparing their level of conformity to other men or women. This experimental manipulation, consistent with several prior works (Glick et al., 2007; Hunt et al., 2016; Salvati et al., 2016; Salvati, Pellegrini, et al., 2021a, 2021b), aimed to elicit a sense of confirmation or threat of one's adherence to societal expectations by providing false feedback. This led participants to believe either to be aligned or deviated from their traditional gender norms.

Table 2
Results of the simple mediation analysis in Sample A with cis-heterosexual men.

	B	*β*	SE	*t*	*p*
a path:	0.933	0.457	0.121	7.710	<0.001
b path:	0.268	0.278	0.067	4.010	<0.001
c' path:	0.332	0.169	0.136	2.438	0.016
	B	*β*	SE	LLCI	ULCI
Total:	0.582	0.296	0.125	0.335	0.828
Indirect:	0.250	0.127	0.083	0.104	0.428
Indirect:	Conformity to masculine norms → anti-LGBTQ+ CBs → denial of discrimination				

Note: $R^2 = 0.209$ for the mediator (GILC) model; $R^2 = 0.149$ for the outcome (Denial) model.

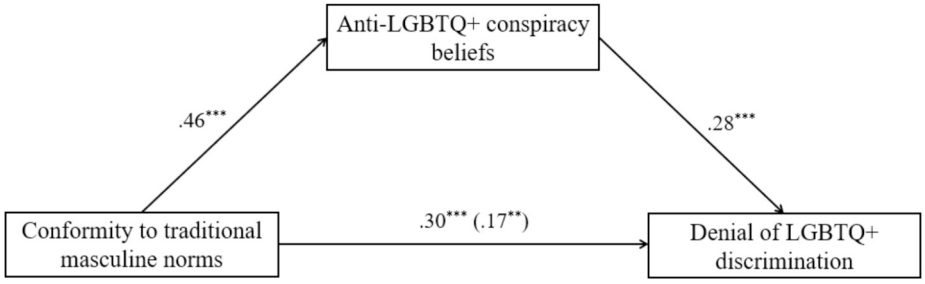

Fig. 1. Hypothesised simple mediation pathway model and standardised coefficients in Sample A.

Table 3
Results of the simple mediation analysis in Sample B with cis-heterosexual women.

	B	*β*	SE	*t*	*p*
a path:	0.354	0.178	0.121	2.921	0.004
b path:	0.359	0.320	0.067	5.397	<0.001
c' path:	0.171	0.076	0.132	1.289	0.199
	B	*β*	SE	LLCI	ULCI
Total:	0.298	0.134	0.137	0.028	0.568
Indirect:	0.127	0.057	0.057	0.032	0.256
Indirect:	Conformity to feminine norms → anti-LGBTQ+ CBs → denial of discrimination				

Note: $R^2 = 0.032$ for the mediator (GILC) model; $R^2 = 0.117$ for the outcome (Denial) model.

Second, we examined emotional responses as a potential mechanism explaining the causal effect of the manipulated perception on LGBTQ+ CBs and then the denial of LGBTQ+ discrimination. Among male participants (Sample A), we predicted that confirming conformity to masculine gender norms (vs. threatening condition) would lead to lower levels of negative emotions and LGBTQ+ CBs, and consequently, to lower levels of denial (H2a). Moreover, among participants in the control (vs. threatening) condition, we expected that lower levels of negative emotions and LGBTQ+ CBs would lead to lower denial (H2b).

Among female participants (Sample B), we hypothesised that confirming conformity to feminine gender norms (vs. threatening condition) would lead to lower levels of negative emotions and LGBTQ+ CBs, and consequently, to lower levels of denial (H2c). However, we adopted an exploratory approach for the analogous pathway in women in the control (vs. threatening) condition (H2d). Prior evidence suggests that violations of traditional feminine gender norms may have a less direct or weaker connection to emotional responses and cognitive biases, as identifying with typical masculine traits has a positive valence and is even rewarded in our heteronormative context, regardless of the gender of who conforms to its societal expectations (Berke et al., 2017; Bosson & Vandello, 2011; Rudman & Glick, 2001).

3.1. Method

3.1.1. Participants

The sample was established according to a power analysis specifically designed for mediating effects, which entails a Monte Carlo simulation approach (Schoemann et al., 2017). We estimated statistical power for a serial mediation model by setting a high-power threshold of 0.80 and conservative effect sizes (i.e., expected correlation of 0.20) among the predictor, mediators, and criterion (Cohen, 1988; 2013). We also opted for a large total number of power analysis replications (5000) and wide coefficient draws per replication (20,000). A sample size of around 430 participants was needed to achieve a statistical power of 0.82 (95%CI = 0.80; 0.84).

For purposes of this research, we needed to consider only cis-heterosexual people, so only participants who identified themselves as cisgender and heterosexual were included.

3.1.1.1. Sample A. Sample A consisted of 549 cis-heterosexual men with ages ranging from 18 to 82 years ($M = 32.46$, $SD = 16.05$), almost all Italian (98.5 %). 45.7 % of the sample were students, 52.8 % were working people, and 1.5 % were unemployed. As for educational level, 58.3 % of the sample had a high school diploma, while 32.6 % had a graduate or postgraduate qualification. 48.8 % of the participants defined themselves as non-religious, 46.3 % as Christian Catholics, while the remaining 4.9 % identified with other religions. As for political orientation, measured on a 7-point Likert scale where 1 = *far left wing* and 7 = *far right wing*, the mean was 3.79 ($SD = 1.44$).

3.1.1.2. Sample B. The sample consisted of 870 cis-heterosexual women, with ages ranging from 18 to 86 years ($M = 31.18$, $SD = 15.39$), almost all Italian (98.0 %). 52.8 % of the sample were students, 43.5 % were working people, and 2.2 % were unemployed. As for educational level, 63.2 % of the sample had a high school diploma, while 29.5 % had a graduate or postgraduate qualification. 35.7 % of the participants defined themselves as non-religious, 56.9 % as Christian Catholics, while the remaining 7.4 % identified in other religions. As for political orientation, measured on a 7-point Likert scale where 1 = *far left wing* and 7 = *far right wing*, the mean was 3.50 ($SD = 1.32$).

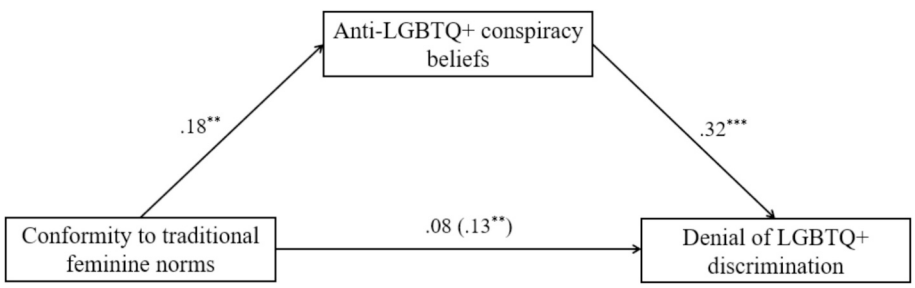

Fig. 2. Hypothesised simple mediation pathway model and standardised coefficients in Sample B.

3.1.2. Procedure and measures

As for Study 1, participants were recruited by psychology students who were instructed to enrol non-student, adult participants in exchange for extra course credits (i.e., snowball sampling procedure). All the participants read the informed consent before proceeding with the online questionnaire by Qualtrics, with filters according to the gender of participants for the completion of some specific scales. First, we collected data on participants' sociodemographic characteristics. Then, the experimental manipulation was shown, and we focused on measuring exclusively the variables of interest for our hypotheses. At the end of the questionnaire, they were thanked for their participation and a brief written debriefing was provided. The study did not provide any compensation. Ethical approval was received by [blinded for review].

3.1.2.1. Manipulated perception of gender norms conformity. Consistently with procedures used in previous studies (Glick et al., 2007; Hunt et al., 2016; Salvati et al., 2016; Salvati, Pellegrini, et al., 2021a, 2021b), we manipulated the participants' perception of conformity to traditional gender norms by asking them to fill in the BSRI (Bem, 1974), a validated, reliable, and commonly used short personality test where they needed to indicate how much each adjective (e.g., independent, assertive, warm, compassionate) described their personality on a 7-point Likert scale, where 1 = *not at all* and 7 = *absolutely yes*. Therefore, participants were randomly assigned either to the threatening, confirming, or control condition.

Participants in the control condition did not receive any feedback. The remaining subjects received a false feedback score from 0 to 50, indicating whether their personality was extremely feminine (0) or extremely masculine (50). Specifically, in the threatening condition, male participants read that they received a score of 18, whereas female participants read that they received a score of 38. Conversely, in the confirming condition, male participants read that they received a score of 38, whereas female participants read that they received a score of 18.

3.1.2.2. Manipulation check. We used one measure to check the effectiveness of the manipulation, consisting of a single item shown after the manipulation. Participants answered the following statement: "Considering the majority of the people belonging to my gender, I think I obtained a very similar vs. very different personality score" on a 10-point Likert scale, where 1 = *very similar* and 10 = *very different* (Sample A: $M = 5.48$, $SD = 2.33$; Sample B: $M = 4.82$, $SD = 2.12$).

3.1.2.3. Negative emotions. Next, we included a scale of six negative emotional states (i.e., sad, nervous, annoyed, and discomforted) to assess how participants felt after completing the personality test. Responses were indicated on a 5-point Likert scale, where 1 = *not at all* and 5 = *absolutely yes*. Items were coded so that higher scores reflected higher negative emotions, and a total score was computed (Sample A: $M = 1.57$, $SD = 0.81$, $\alpha = 0.86$; Sample B: $M = 1.53$, $SD = 0.78$, $\alpha = 0.84$).

In addition, the following instruments were administered to measure all the variables of interest:

3.1.2.4. Anti-LGBTQ+ conspiracy beliefs. As in Study 1, this variable of interest was measured with the *GILC scale* (Sample A: $M = 1.88$, $SD = 1.00$, $\alpha = 0.95$; Sample B: $M = 1.77$, $SD = 0.89$, $\alpha = 0.92$).

3.1.2.5. Denial of LGBTQ+ discrimination. We included the same three items used in Study 1 to measure denial of LGBTQ+ discrimination (Sample A: $M = 2.17$, $SD = 0.95$, $\alpha = 0.80$; Sample B: $M = 1.85$, $SD = 0.84$, $\alpha = 0.78$).

3.2. Results

3.2.1. Manipulation check

We conducted a one-way analysis of variance (ANOVA) to examine the effectiveness of the manipulation across the three experimental groups: threat condition (0), confirmation condition (1) and control condition (2). Analysis showed that, in Sample A including male participants, confirmed masculinity led participants to believe they answered more similar to the majority of men ($M = 4.41$, $SD = 0.17$) compared to the threat ($M = 6.48$, $SD = 0.16$) and control ($M = 5.41$, $SD = 0.16$) condition, $F(2, 546) = 40.74$, $p < 0.001$, $\eta^2 = 0.13$. Bonferroni post-hoc tests indicated there were significant differences between the confirmation and threat groups ($M_{diff\ 0–1} = 2.07$, $SE_{diff\ 0–1} = 0.23$, $p < 0.001$, *95 % CI* [1.517, 2.619]), between the control and threat groups ($M_{diff\ 0–2} = 1.07$, $SE_{Eiff\ 0–2} = 0.22$, $p < 0.001$, *95 % CI* [0.534, 1.605]), and also between confirmation and control conditions ($M_{diff\ 1–2} = 1.00$, $SE_{diff\ 1–2} = 0.23$, $p < 0.001$, *95 % CI* [0.444, 1.553]). Similarly, in Sample B including female participants, participants in the femininity confirmation condition were led to believe they answered more similar to the majority of women ($M = 3.98$, $SD = 0.12$) in comparison to the threat ($M = 5.79$, $SD = 0.12$) and control ($M = 4.70$, $SD = 0.12$) condition, $F(2, 867) = 61.79$, $p < 0.001$, $\eta^2 = 0.13$. Bonferroni post-hoc tests indicated a significant difference in the perception of similarity with one's gender across groups: specifically, the mean comparison was significant between confirmation and threat groups ($M_{diff\ 0–1} = 1.81$, $SE_{diff\ 0–1} = 0.16$, $p < 0.001$, *95 % CI* [1.420, 2.207]), between the control and threat groups ($M_{diff\ 0–2} = 1.09$, $SE_{diff\ 0–2} = 0.17$, $p < 0.001$, *95 % CI* [0.694, 1.485]), and between confirmation and control conditions ($M_{diff\ 1–2} = 0.72$, $SE_{diff\ 1–2} = 0.17$, $p < 0.001$, *95 % CI* [0.328, 1.119]). Thus, the manipulation of the perception of conformity to gender norms based on their own gender identity was effective.

3.2.2. Correlations

Pearson's correlations are reported in Table 4. The manipulation of the adherence to gender norms (i.e., the independent variable) consisted of three different groups. It was a categorical variable and was dummy-coded with two variables: the first, opposing the confirming condition (coded 1) to the other two (coded 0), and the second, opposing the control condition (coded 1) to the other two conditions (coded 0). By keeping the threatening condition constant across the two dummy variables, we were able to obtain a clear picture of the effects that the threat to gender norms adherence might have in comparison to the other conditions.

Among male participants, we observed that the manipulation dummies correlated with negative emotions in distinct directions: negatively when singling out the confirmation (vs. threat) condition and positively when considering the control (vs. threat) condition, with a small effect size. Negative emotions were positively associated with anti-LGBTQ+ CBs and denial of LGBTQ+ discrimination, as well as anti-LGBTQ+ CBs with denial. Among female participants, the manipulation was negatively associated with negative emotions exclusively when singling out the confirmation (vs. threat) condition. When women received confirmation of their adherence to traditional femininity, negative emotions significantly decreased with a small effect size, but they did not decrease when comparing the control condition to the

Table 4
Correlations of perception of conformity manipulation dummies (CONFIRM vs. THREAT, CONTROL vs. THREAT), negative emotions (NEG_EMO), anti-LGBTQ+ CBs (GILC), and discrimination denial (DENIAL).

	1	2	3	4	5
1. CONFIRM vs. THREAT	–	−0.50***	−0.14***	0.01	0.03
2. CONTROL vs. THREAT	−0.48***	–	−0.03	0.01	−0.01
3. NEG_EMO	−0.13***	0.08*	–	0.07*	0.04
4. GILC	−0.03	0.02	0.19***	–	0.38***
5. DENIAL	−0.05	0.01	0.18***	0.40***	–

Note: Sample A ($N = 549$ men) is below the diagonal and Sample B ($N = 870$ women) is above the diagonal. * $p < 0.05$; *** $p < 0.001$.

threatening one. Positive correlations emerged between negative emotions and anti-LGBTQ+ CBs as well as between anti-LGBTQ+ CBs and denial, whereas the association between negative emotions and denial is non-significant. Correlation analysis suggests that the hypothesised serial mediation model could be profitably investigated.

3.2.3. Hypothesis testing

A serial mediation analysis was conducted to test our hypotheses in both Sample A and B, using PROCESS macro for SPSS, Model 6 (Hayes & Preacher, 2014). The model includes the predictor (i.e., manipulated gender norms conformity based on their own gender identity), two serial mediators (i.e., negative emotions and anti-LGBTQ+ CBs), and the outcome (i.e., denial of LGBTQ+ discrimination).

In Sample A (Table 5), results showed that when men's adherence to normative masculinity was confirmed (vs. threatened), negative emotions significantly decreased. The confirming (vs. threatening) condition was unrelated to LGBTQ+ CBs and denial of LGBTQ+ discrimination. The control (vs. threatening) condition was significantly associated with negative emotions but not with anti-LGBTQ+ CBs, as well as denial. Negative emotions were positively associated with CBs regarding the LGBTQ+ community. Negative emotions and anti-LGBTQ+ CBs were positively associated with denial. The total effect of both the confirming and control conditions (vs. threatening condition) on denial was non-significant. Importantly, we found a significant and negative serial indirect association through negative emotions and then anti-LGBTQ+ CBs, supporting H2a. It also highlighted a significant and negative indirect effect of traditional masculinity confirmation (vs. threatening condition) on denial through negative emotions, but not through anti-LGBTQ+ CBs. Analogously, the serial indirect association through negative emotions and then anti-LGBTQ+ CBs was significant, confirming H2b. Also, we found a significant indirect effect of the control condition (vs. threatening condition) on denial through negative emotions, but not through anti-LGBTQ+ CBs (Fig. 3).

In Sample B (Table 6), results showed that when women's conformity to traditional femininity was confirmed (vs. threatening condition), negative emotions significantly decreased. The confirming (vs. threatening) condition was unrelated to anti-LGBTQ+ CBs and denial of LGBTQ+ discrimination. The control (vs. threatening) condition was instead not associated with negative emotions, anti-LGBTQ+ CBs, and denial. Negative emotions were positively associated with CBs regarding the LGBTQ+ community but not with denial, whereas anti-LGBTQ+ CBs were positively associated with the latter. Total effects of both the confirming and the control condition (vs. threatening condition) on denial were non-significant. We found a significant and negative serial indirect association through negative emotions and then anti-LGBTQ+ CBs, supporting H2c. However, the indirect effects of traditional femininity confirmation (vs. threatening condition) on denial through negative emotions and anti-LGBTQ+ CBs were not significant. Considering the control (vs. threatening) condition, the serial indirect association through negative emotions and then anti-LGBTQ+ CBs was not significant. This finding aligns with our exploratory hypothesis (H2d), suggesting that the pathway may differ for women compared to men. Importantly, we observed non-significant indirect effects of the control (vs. threatening) condition on denial through negative emotions and anti-LGBTQ+ CBs (Fig. 4).

Table 5
Results of the serial mediation path analysis in Sample A.

		B	β	SE	t	p
a1 path:	X1	−0.348	−0.199	0.084	−4.151	<0.001
	X2	−0.213	−0.125	0.082	−2.611	0.009
a2 path:	X1	0.010	0.004	0.106	0.090	0.928
	X2	0.048	0.023	0.102	0.468	0.640
b1 path:		0.123	0.104	0.048	2.565	0.011
b2 path:		0.357	0.375	0.038	9.419	<0.001
d path:		0.236	0.190	0.053	4.450	<0.001
Direct:	X1	−0.058	−0.028	0.094	−0.615	0.539
	X2	−0.004	−0.002	0.089	−0.049	0.961
	Indirect effects of the manipulation on denial of LGBTQ+ discrimination					
		B	β	SE	LLCI	ULCI
Total:	X1	−0.126	−0.042	0.101	−0.324	0.071
	X2	−0.031	−0.011	0.098	−0.223	0.160
Ind 1:	X1	−0.043	−0.021	0.022	−0.090	−0.005
	X2	−0.026	−0.013	0.016	−0.063	−0.001
Ind 2:	X1	0.003	0.002	0.037	−0.069	0.078
	X2	0.017	0.008	0.037	−0.051	0.091
Ind 3:	X1	−0.029	−0.014	0.012	−0.058	−0.010
	X2	−0.018	−0.009	0.010	−0.039	−0.003
	Indirect effect key					
Ind 1 (a1*b1):		Manipulation → negative emotions → denial of discrimination				
Ind 2 (a2*b2):		Manipulation → anti-LGBTQ+ CBs → denial of discrimination				
Ind 3 (a1*d*b2):		Manipulation → negative emotions → anti-LGBTQ+ CBs → denial of discrimination				

Note. X1 indicates the manipulation dummy where 0 = threatening condition, and 1 = confirmation condition; X2 indicates the manipulation dummy where 0 = threatening condition, and 1 = control condition. $R^2 = 0.032$ for the first mediator (Neg_Emo) model; $R^2 = 0.036$ for the second mediator (GILC) model; $R^2 = 0.168$ for the outcome (Denial) model.

3.3. Discussion

These results partially provided further support for our hypotheses that CBs regarding LGBTQ+ issues can contribute to explaining the association between traditional gender norms, based on their own gender identity, and denial of LGBTQ+ discrimination.

In Sample A, when men's conformity to normative masculinity was confirmed (vs. threatened), they reported fewer negative emotions. Negative emotions were positively associated with anti-LGBTQ+ CBs, which in turn were positively associated with the denial of LGBTQ+ discrimination. However, confirmation of conformity to traditional masculinity (vs. threat) did not directly affect anti-LGBTQ+ CBs or denial of discrimination, nor did the control condition (vs. threat). Indirectly, confirming conformity to masculinity (vs. threat) was associated with lower levels of denial through lower negative emotions but not directly through anti-LGBTQ+ CBs. Confirming men's conformity to societal gender norms (vs. threatening it), their negative emotional response and anti-LGBTQ+ CBs were lower, with consequently lower levels of denial of discrimination. The same indirect pattern of serial mediation was found to be significant among participants in the control (vs. threatening) condition, supporting both our hypotheses (H2a and H2b).

In Sample B, when women's conformity to traditional femininity was confirmed (vs. threatened), negative emotions were lower. Negative emotions were not directly associated with denial but were positively associated with anti-LGBTQ+ CBs, which then were positively related to denial. A serial indirect pathway from conformity confirmation through lower negative emotions and subsequently lower anti-LGBTQ+ CBs to less denial was significant, supporting H2c. No significant direct or indirect effect emerged from conformity confirmation (vs. threat) on denial via emotions alone or through anti-LGBTQ+ CBs. The control condition did not significantly impact negative emotions, anti-LGBTQ+ CBs, or denial. In the control (vs. threat) condition, this serial pathway was non-significant (H2d).

4. General discussion

The present studies provided converging evidence of the role that anti-LGBTQ+ CBs have in explaining the association between traditional gender norms and negative consequences for sexual minorities. We conducted two studies, and the results obtained with a correlational design (Study 1) were broadened with an experimental one (Study 2). Specifically, we tested whether and how anti-LGBTQ+ CBs may explain the association between conformity to traditional gender norms based

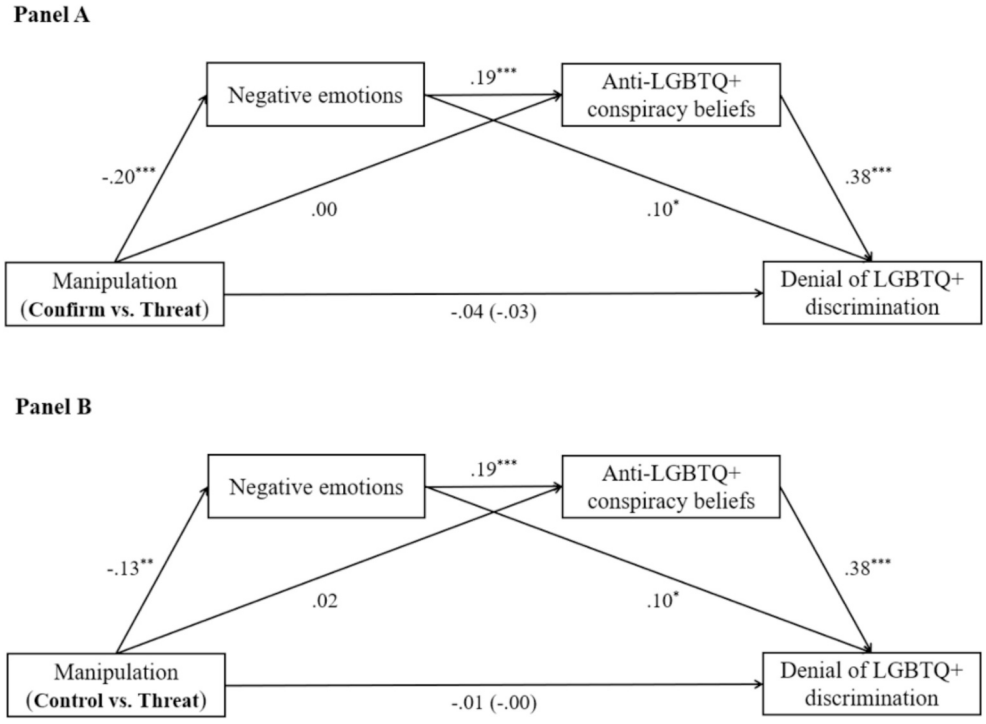

Fig. 3. Hypothesised serial mediation pathway model in Sample A with cis-heterosexual men. Panel A shows standardised coefficients when considering the Confirm vs. Threat comparison. Panel B shows the same coefficients for the Control vs. Threat comparison.

Table 6
Results of the serial mediation path analysis in Sample B.

		B	*β*	SE	*t*	*p*
a1 path:	X1	0.020	0.012	0.064	0.311	0.756
	X2	−0.208	−0.126	0.064	−3.259	0.001
a2 path:	X1	0.026	0.014	0.074	0.346	0.729
	X2	0.050	0.027	0.074	0.675	0.450
b1 path:		0.009	0.008	0.034	0.266	0.790
b2 path:		0.353	0.377	0.030	11.944	<0.001
d path:		0.083	0.073	0.039	2.130	0.034
Direct:	X1	0.012	0.006	0.064	0.178	0.859
	X2	0.059	0.033	0.065	0.906	0.366
	Indirect effects of the manipulation on denial of LGBTQ+ discrimination					
		B	*β*	SE	LLCI	ULCI
Total:	X1	0.021	0.007	0.070	−0.115	0.158
	X2	0.068	0.030	0.069	−0.068	0.204
Ind 1:	X1	0.000	0.000	0.003	−0.004	0.006
	X2	−0.002	−0.001	0.008	−0.018	0.014
Ind 2:	X1	0.009	0.005	0.026	−0.042	0.062
	X2	0.018	0.010	0.026	−0.033	0.070
Ind 3:	X1	0.001	0.000	0.002	−0.004	0.005
	X2	−0.006	−0.003	0.004	−0.015	−0.000
	Indirect effect key					
Ind 1 (a1*b1):			Manipulation → negative emotions → denial of discrimination			
Ind 2 (a2*b2):			Manipulation → anti-LGBTQ+ CBs → denial of discrimination			
Ind 3 (a1*d*b2):			Manipulation → negative emotions → anti-LGBTQ+ CBs → denial of discrimination			

Note. X1 indicates the manipulation dummy where 0 = threatening condition, and 1 = control condition; X2 indicates the manipulation dummy where 0 = threatening condition, and 1 = confirming condition. $R^2 = 0.018$ for the first mediator (Neg_Emo) model; $R^2 = 0.006$ for the second mediator (GILC) model; $R^2 = 0.144$ for the outcome (Denial) model.

on their own gender identity (measured in Study 1, then manipulated in Study 2) and denial of discrimination against the LGBTQ+ community.

Study 1 showed that adherence to traditional gender norms is positively associated with denial of LGBTQ+ discrimination through anti-LGBTQ+ CBs: the more people adhere to traditional gender norms based on their own gender identity, the more their CBs regarding LGBTQ+ issues increase, the more they deny the existence of discrimination against the LGBTQ+ community. These findings expand our knowledge of the hypothetical psychological mechanisms underlying this relationship, confirming a total and partial mediation pattern –among cis-heterosexual men and women, respectively– through anti-LGBTQ+ CBs. Moreover, they further corroborate the existence of a relationship between conservative, traditional gender views and negative consequences for sexual minorities, as seen in previous work (Berke et al., 2021; Falomir-Pichastor et al., 2019; Federico et al., 2018).

To the best of our knowledge, no studies to date have focused on anti-LGBTQ+ CBs as a potential psychological mechanism to explain the relationship between conformity to traditional values and minority discrimination. Related studies do support the idea that engagement in conservative values, including in traditional gender norms, often correlates with negative attitudes towards LGBTQ+ rights. For example, traditional values are sometimes leveraged to justify anti-LGBTQ+ sentiments, picturing LGBTQ+ identities as threats to societal stability or traditional family structures (Human Rights Watch, 2017). Additionally, when people hold strong traditionalist or nationalist views, they may tend more to conspiratorial thinking, especially regarding groups perceived as 'other' (Federico et al., 2018; Jolley & Douglas, 2014; Van Prooijen & Van Vugt, 2018). Though most research has focused on broader political attitudes, these patterns suggest that a similar effect could underlie discrimination against LGBTQ+ individuals when considering specifically traditional gender norms and roles.

Study 2 extended previous results in several ways. Participants' perception of conformity to conventional gender norms was manipulated by confirming or threatening it, while the emotional response to the manipulation was introduced as a potential explanation of the relationship between traditional gender norms and CBs and, consequently, denial of LGBTQ+ discrimination. Interestingly, results indicate that confirming both men's and women's conformity to traditional gender norms indirectly reduces denial of LGBTQ+ discrimination,

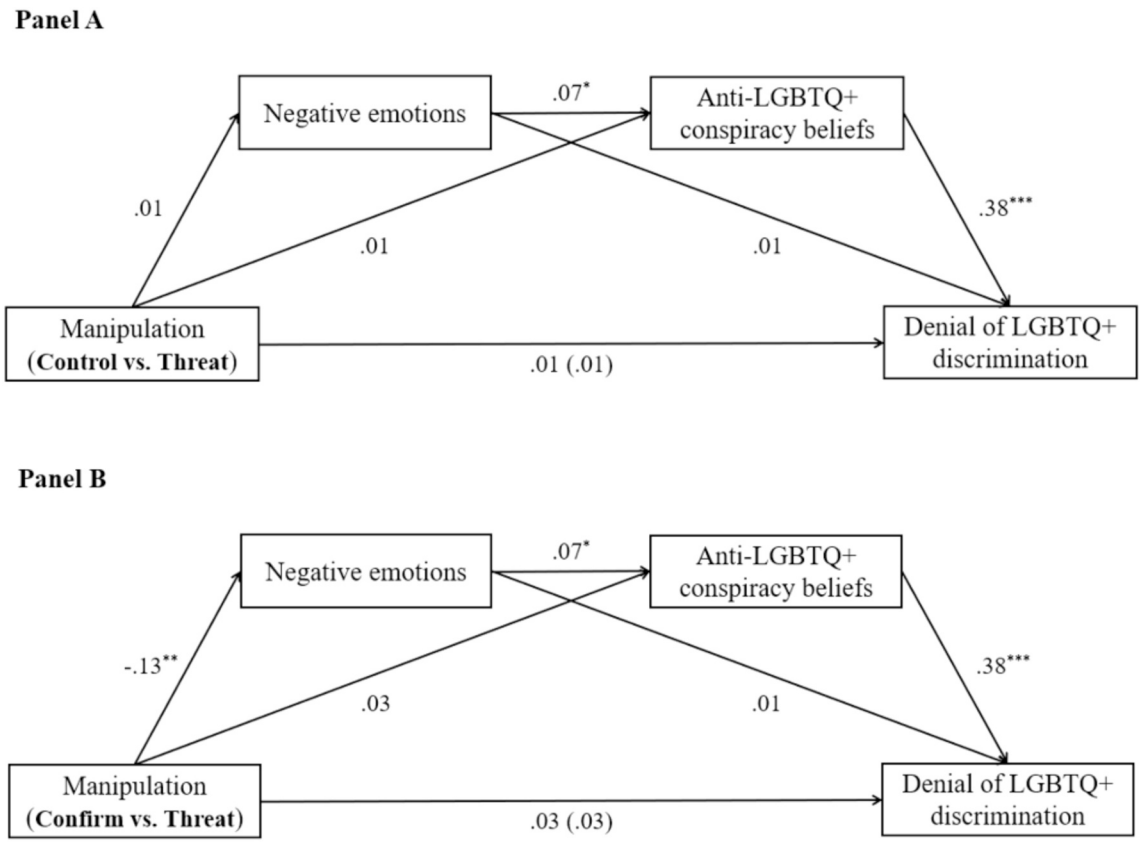

Fig. 4. Hypothesised serial mediation pathway model in Sample B with cis-heterosexual women. Panel A shows standardised coefficients when considering the Control vs. Threat comparison. Panel B shows the same coefficients for the Confirm vs. Threat comparison.

primarily through a sequential reduction in negative emotions and LGBTQ+ CBs. These observations may suggest that by confirming one's adherence to gender norms the traditional societal order and structure are also confirmed. This reassures people about the validity of conservative values and their identities, enhancing their sense of belonging and lowering their feelings of uncertainty.

However, the results were nuanced, particularly concerning gender. While a significant indirect pathway emerged in the confirming (vs. threatening) condition for both men and women, this same pathway did not reach significance in the control (vs. threat) condition among cis-heterosexual women. This suggests that the significance and emotional impact of gender norm adherence may vary between genders. Importantly, it needs to be considered that separate mediation models were tested for each gender, so these results should not be interpreted as statistically significant differences between men and women. Any gender differences observed across models remain speculative and should be interpreted cautiously.

Nevertheless, the reported findings are exploratory insights grounded in prior literature, which might be useful to tentatively explain our findings. The differences between observed patterns might be rooted in the distinct societal pressures associated with gender conformity. Men often face heightened pressure to uphold rigid, traditional masculinity and tend to report stronger emotional responses, leading to behaviours both aimed at maintaining or restoring their male status (Berke et al., 2017; Bosson & Vandello, 2011; Hunt et al., 2015; Salvati, Pellegrini, et al., 2021a; Salvati, Pellegrini, et al., 2021b; Thompson & Pleck, 1986). Conversely, women who adhere to traditional feminine prescriptions –despite these being constraining– tend to report higher self-esteem, well-being, and life satisfaction (Oswald et al., 2019). At the same time, traits associated with masculinity, such as independence or assertiveness, are generally highly valued, leading to positive perceptions of women who exhibit these qualities (Rudman & Glick, 2001). This bias, where masculinity is rewarded across genders, might lead to a less pronounced emotional response from women when their adherence to feminine norms is questioned. Thus, a weaker women's emotional response may have a less pronounced effect on LGBTQ+ conspiracy beliefs, aligning with findings from Study 1 that preliminarily suggested a partial mediational effect for LGBTQ+ CBs in women.

5. Limitations, implications, and future directions

Our research opens various new questions and avenues for future research. The final sample sizes in Study 1 were slightly below the estimates of the a priori power analysis due to practical constraints. Participant recruitment was conducted by students from different university courses who had the opportunity to earn extra course credits by recruiting a number of non-student, adult participants. However, participation was entirely voluntary; not all courses were large, and not all students decided to take part. We acknowledge these underpowered samples may have limited our ability to detect small effect sizes. In Study 2, the recruited sample was larger for both genders, as participant recruitment followed the same snowballing sampling procedure but involved a greater number of students. Retaining the full samples was a conservative decision to enhance the stability and generalisability of our findings. Study 2 not only expanded the research design with the introduction of an experimental manipulation and an additional mediator variable, but also addressed the issue of limited statistical power of Study 1. Moreover, both studies relied on samples where participants were primarily cisgender, heterosexual, and from a similar cultural background. Future research could include more diverse samples, such as people from various cultural backgrounds, gender identities, and sexual orientations. Similar studies could be used to examine how LGBTQ+ people adhere to traditional gender norms of masculinity and femininity prescribed by society, whether this leads to believing in

conspiracies about one's ingroup and, if so, what are the consequences in terms of personal and social well-being.

Study 2 implemented an experimental design manipulating participants' perception of conformity to the traditional view of gender roles and behaviours, confirming or threatening a part of their personal identity. Thus, future research could benefit from examining other types of antecedents of anti-LGBTQ+ CBs – i.e., social and systemic identity threats – to clarify whether they may elicit conspiratorial beliefs and different emotional responses among participants. Future studies may also explore the subtler ways in which adherence to traditional femininity influences emotions and attitudes towards LGBTQ+ issues, as most existing research centres on male identity threat and 'fragile masculinity'. Analysing these gender-specific pathways can provide deeper insight into what expectations are faced by different gender groups.

In addition, our research regarding the antecedents and consequences of anti-LGBTQ+ CBs may be useful to guide social policies and interventions. Understanding how traditional norms about gender roles and behaviours can influence people's enhancement of conspiratorial beliefs about the LGBTQ+ community may suggest the importance of educational initiatives to dismantle gender stereotypes and disrupt gender-led social scripts. At the same time, the present study highlighted the negative impact LGBTQ+ CBs have on people and communities: promoting public awareness campaigns to help people assess conspiratorial information and identify it when used in the media or as a means of political propaganda may be a way to work towards the reduction of the harmful consequences CBs have in our societies.

6. Conclusions

It is well-established that traditional gender norms are often linked to negative attitudes and discriminatory behaviour towards LGBTQ+ individuals. However, less is known about the underlying psychological mechanisms of this relationship. Our research shows that conformity to these norms can lead to lower negative emotions and reduced belief in anti-LGBTQ+ conspiracy theories, ultimately contributing to decreased discrimination. By exploring this connection, we have shed light on the complex role of gender norms in shaping attitudes towards sexual minorities. This research opens up new avenues for future investigation into anti-LGBTQ+ conspiracy theories and beliefs.

Availability of data and material

The data that support the findings of this study are available from the corresponding author upon reasonable request.

CRediT authorship contribution statement

Nadia Valsecchi: Writing – review & editing, Writing – original draft, Formal analysis. **Valeria De Cristofaro:** Writing – review & editing, Writing – original draft, Project administration, Investigation, Conceptualization. **Valerio Pellegrini:** Writing – review & editing, Software, Methodology, Formal analysis, Data curation, Conceptualization. **Marco Salvati:** Writing – review & editing, Project administration, Investigation, Funding acquisition, Conceptualization. **Mauro Giacomantonio:** Writing – review & editing, Supervision.

Consent for publication

The manuscript has been seen and reviewed by all authors, and all authors agree to the submission of the manuscript in its current form.

Ethics approval

All procedures performed in studies involving human participants were conducted in accordance with the ethical standards of the institutional and national research committee and the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. The article does not refer to any studies with animals performed by any of the authors.

All studies performed in the research received ethical approval from the Ethical Review Board for Research in Psychology at the University of Verona (Rep. n. 1298/2024–Prot. n. 226,251 of 10/06/2024).

Statements and declarations

We formally declare that the manuscript has not been previously published in any form. It is neither under consideration nor in press with another publisher.

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Declaration of competing interest

The authors declare no conflicts of interest.

Data availability

Data will be made available on request.

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