



Attitudes toward Same-Sex Marriage and Parenting, Ideologies, and Social Contacts: the Mediation Role of Sexual Prejudice Moderated by Gender

Olivier Vecho¹ · Martine Gross² · Emmanuel Gratton³ · Salvatore D'Amore⁴ · Robert-Jay Green⁵

Published online: 2 May 2018

© Springer Science+Business Media, LLC, part of Springer Nature 2018

Abstract

Recognition of same-sex marriage and parenting has increased in the last two decades but remains a controversial issue in which public opinion plays a role, as it can influence political leaders but also determine the immediate environment of same-sex families. The literature highlights the effect of religiosity, political orientation, beliefs about etiology of homosexuality, and social contacts with gay men and lesbians on attitudes toward same-sex marriage and parenting (ASSMP). The aim of this study was to explore the under-studied mediation role of sexual prejudice in this process and how participants' gender moderated the mediation effects. Data were collected from 1416 heterosexual French students and analyzed with moderated mediation models in accordance with recent recommendations from Hayes (2013). Sexual prejudice mediated the effects of religiosity, political orientation, and etiological beliefs on ASSMP more strongly in men than in women. It also mediated the effect of contact with gay and lesbian persons and same-sex couples on ASSMP in men but not in women. The results highlight the need to explicitly deconstruct negative beliefs about homosexuality during debates about same-sex marriage and same-sex parenting, even when prejudice against homosexuality itself is not explicit in opponents' discourse.

Keywords Attitudes toward same-sex marriage and parenting · Mediating role of sexual prejudice moderated by gender · Religiosity · Political orientation · Etiological beliefs about homosexuality · Social contacts

Public opinion plays a role in the evolution of the rights of sexual minorities as it can influence political leaders, and it partly determines the immediate environment in which people from these minorities live, which in the worst cases constitutes a source of rejection and stress and in the best cases a source of legitimization and support (Lax & Phillips, 2009). In this context, attitudes toward same-sex marriage and parenting provide an insight into the social context to which same-sex

families are exposed, and some studies suggest that having the right to marry can be positively associated with the psychological well-being of lesbian, gay, and bisexual persons (Rostosky, Riggle, Horne, & Miller, 2009; Wight, LeBlanc, & Badgett, 2013; see also the resolution of the American Psychological Association on equal access to same-sex marriage, 2011). Conversely, the prohibition of marriage is likely to be associated with greater psychological distress (stress, anxiety, depressive symptoms, etc.) (Giammattei & Green, 2012; Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010). Thus, legislative progress worldwide is legitimized by its beneficial effects on the individuals concerned and their families. This study aims to extend actual knowledge about the factors that influence attitudes toward same-sex marriage and parenting, by examining the mediating role of sexual prejudice moderated by gender in this process.

Since the end of the twentieth century, many countries have made changes to their legislation in order to protect sexual minorities, especially in the areas of health, work, and housing, and significant advances have also been made in relation to family rights (Carroll & Mendos, 2017). For example,

✉ Olivier Vecho
olivier.vecho@parisnanterre.fr

¹ Université Paris Nanterre, UFR SPSE, 200 avenue de la République, 92001 Nanterre Cedex, France

² CNRS, CeSor, 10 rue Monsieur le Prince, 75006 Paris, France

³ LUNAM Université – Université d'Angers, 11 bd Lavoisier, 49045 Angers Cedex, France

⁴ Université Libre de Bruxelles, Avenue Franklin Roosevelt 50, 1050 Brussels, Belgium

⁵ California School of Professional Psychology, Alliant University, 1 Beach Street, Suite 100, San Francisco, CA 94133-1221, USA

around 20 countries around the world have made it possible for same-sex couples to marry, adopt, and even to access assisted reproduction. The growing number of alternatives available to infertile heterosexual couples desiring to have children, namely in-vitro fertilization and surrogate pregnancy, now allow some same-sex couples to realize their own dream of starting a family. Nonetheless, only a small minority of countries is fully supportive of same-sex parenting (Carroll & Mendos, 2017).

Legalization of Same-Sex Marriage and Parenting in France

Public opinion can have a direct effect on supporting, rejecting or, at least, determining the nature of bills concerning the recognition of same-sex families. Indeed, two referendums were held in European countries in 2015 on the question of permitting same-sex couples to marry: the bill became law in Ireland but was not passed in Slovenia (Carroll, 2016). Legislative progress on the issue also depends on the political will of the powers that be. To increase the legitimacy of bills whose aim is to prohibit or support same-sex parenting, governments taking positions on these questions can rely at least partially on public opinion, as indicated by public surveys and public demonstrations by those who support or oppose such developments. In France, the bill to legalize same-sex marriage and adoption, which was part of President Hollande's election manifesto, before it was finally passed on 18 May 2013, and well beyond, met with considerable opposition, the extent of which was doubtless unexpected. This movement probably led the government to withdraw access to MAP (medically assisted procreation) for lesbian couples from their bill, a provision contained in its initial version (Stambolis-Ruhstorfer & Tricou, 2017). Almost 3 years later, in February 2016, the Ministry for the Family, Children and Women's Rights even declared itself opposed to the reopening of this debate for fear of the re-emergence of this opposition movement (Mallaval & Luyssen, 2016). As in many other countries, in France, far right movements are more conservative than leftist ones in terms of social questions, as demonstrated by the recent debate on access to marriage and adoption. This movement was largely centered in, but not limited to, religious and political communities. Most religious institutions in France, including the Catholic Church which represents the majority religion, condemn GL (gay men and lesbian) activity, or at least the granting of the right of access to marriage, parenting, and, more broadly, social recognition of same-sex parenting (Béraud, 2015). Research literature also clearly shows that the higher the degree of religiosity, the more negative are attitudes toward the marriage of same-sex persons (for example Barth, Overby, & Huffmon, 2009; Becker, 2012; Duncan & Kimmelmeier, 2012; Hollekim, Slaatten, &

Anderssen, 2012; Lee & Hicks, 2013; Merino, 2013; Olson, Cadge, & Harrison, 2006; Todd & Ong, 2012) and same-sex parenting (Becker, 2012; Hollekim et al., 2012; Morse, McLaren, & McLachlan, 2007; Sigillo, Miller, & Weiser, 2012). Concerning political orientation, studies have shown that liberal individuals are more supportive than conservative ones of change and social equality, preferring, as they do, social progress to tradition (Jost, Federico, & Napier, 2009). As a consequence, the more conservative individuals claim to be, the less supportive they are of same-sex unions (for example, Barth et al., 2009; Becker, 2012; Duncan & Kimmelmeier, 2012; Hollekim et al., 2012; Lee & Hicks, 2013; Todd & Ong, 2012) and same-sex parenting (Becker, 2012; Hollekim et al., 2012), and the more they predict confusion in the children of same-sex couples in terms of their gender identity and sexual orientation (McLeod, Crawford, & Zeichmeister, 1999).

In addition to religiosity and political orientation, past research has also highlighted the role played by erroneous beliefs about homosexuality or lack of knowledge about sexual minorities in creating opposition to same-sex marriage and parenting. In particular, they have brought to light connections with beliefs about the etiology of homosexuality and contacts with sexual minorities. According to the Attribution Theory, individuals perceive behaviors as being voluntary or involuntary and this perception in turn influences attitudes toward these behaviors: thus, individuals are less tolerant of voluntary behaviors than of involuntary ones (Weiner, 1979). When applied to sexual orientation, this theory has elicited the explanation that individuals who think that being gay or lesbian is biologically determined (involuntary) have more positive attitudes toward GL persons than those who think that it is acquired and that it springs from a choice (involuntary) (Whitley, 1990). More recently, Hegarty (2002) emphasized the role of culture in these processes, showing that the immutability beliefs only correlated with tolerance toward GL persons when these beliefs were perceived as expressions of tolerance, but only in an American sample and not in a British sample. The difference observed with attitudes toward GL persons has also been established with the attitudes toward same-sex marriage: the more strongly individuals believe that being gay or lesbian is a choice, the less they support marriage for same-sex persons (Duncan & Kimmelmeier, 2012; Frias-Navarro, Monterde-i-Bort, Pascual-Soler, & Badenes-Ribera, 2015); the more they think that being gay or lesbian is an acquired characteristic, the more they think that same-sex parenting has deleterious effects on children's psychological adjustment (Frias-Navarro & Monterde-i-Bort, 2012) and the less they support adoption by same-sex couples (Frias-Navarro et al., 2015). Finally, research in the field of social contact minority groups has also contributed valuable knowledge about attitudes toward these groups. Numerous studies have supported Allport's hypothesis of social contact (Allport, 1954), according to which negative attitudes toward

stigmatized groups diminish as a result of direct interaction with these groups (Pettigrew & Tropp, 2006). Such contacts are likely to increase empathy, reduce anxiety, and thus reduce prejudice, especially if they are high-quality contacts that allow discussions on what means being gay or lesbian in everyday life (Herek, 2009a; Herek & Capitanio, 1996). This conclusion is valid for the attitudes of heterosexual persons toward GL persons (Smith, Axelton, & Saucier, 2009). In a meta-analysis of studies on the role of social contact, Lewis (2011) states that having gay/lesbian friends increases the likelihood of support for sexual minority rights such as marriage and adoption. The study of Barth et al. (2009) of a random sample of adults reveals that the more contact participants have with GL persons, the more supportive they are of same-sex marriage. In another random sampling of adults, Morse et al. (2007) observe no difference in the evaluation of parental competences in gay/lesbian parents nor in the risk incurred by their children, whether they have contacts with GL persons or same-sex parents or not. Furthermore, Barth and Parry (2009) suggest that knowing at least one GL person has a weaker effect on attitudes to marriage and same-sex parenting than on attitudes to gay or lesbian persons. According to Costa, Pereira, and Leal (2015), contacts have a positive effect on attitudes toward same-sex marriage and parenting only if such contacts are frequent, fostering ease in relationships and thus reducing sexual prejudice. As noted by these authors, sexual prejudice seems to be a key concept for understanding the processes underlying attitudes toward same-sex marriage and parenting. Indeed, the literature empirically shows the pertinence of distinguishing attitudes toward GL persons from attitudes to the rights that could be granted to them (Herek, 2009a), as studies show a negative and significant correlation between sexual prejudice and support for equal rights for sexual minorities. However, this correlation is too weak to conclude that these two concepts are similar, or that sexual prejudice completely reflects the points of view on social policies that concern them (Herek, 2009a; Hooghe & Meeusen, 2013; Moskowitz, Rieger, & Roloff, 2010).

The Moderated Mediating Role of Sexual Prejudice and Gender

Two reasons lead us to hypothesize a mediating role of sexual prejudice. Firstly, during the debates on the opening of marriage and adoption to same-sex couples in France, the question of the role of sexual prejudice in the positions taken by opponents of the bill also arose. Certainly, the official arguments of the opposition movements were not based on rejection of homosexuality itself, but rather on adherence to a traditional conjugal (one man and one woman) and familial (a child raised by one mother and one father) model that presumably provides social stability and durability, as well as satisfactory

development for any children involved. Moreover, many opponents denied that their mobilization was the expression of sexual prejudice, which is all the more comprehensible since homophobic acts and speech are punishable under French law. In spite of this, numerous homophobic pronouncements were put forward, even publically, by political representatives, who, for example, associated homosexuality with pedophilia, incest, zoophilia, or even terrorism (for example, see Ortelli, 2012). This homophobic context created a negative climate for GL persons and their families, as witnessed by GL support associations (Le Refuge, 2014; SOS Homophobie, 2014). This omnipresence of sexual prejudices leads us to believe that the effects of religiosity, political orientation, beliefs about etiology of homosexuality, and social contact with sexual minorities on attitudes toward same-sex marriage and parenting are not direct effects only.

Secondly, the literature supports the idea of a central role played by sexual prejudice in these questions. On the one hand, it shows that sexual prejudices are higher with higher levels of religiosity, right-wing political orientation and beliefs that homosexuality is learned, and when contacts with gay and lesbian people are low (Herek, 2009b). On the other hand, as far as attitudes toward same-sex parenting are concerned, previous studies have revealed that people with high level of sexual prejudice are less in favor of same-sex marriage (Moskowitz et al., 2010), evaluate the parental competence of GL persons less positively (Massey, 2007; Massey, Merriwether, & Garcia, 2013), and are less disposed to entrust a child to a same-sex couple than to a heterosexual couple (Fraser, Fish, & McKenzie, 1995). Beyond the association of sexual prejudice with, on the one hand, religiosity, political orientation, beliefs about etiology of homosexuality, and contacts with sexual minorities, and on the other hand, attitudes toward rights of sexual minorities, few studies have been conducted on the role of sexual prejudice in these processes and, as we will explain below, the statistical method used to examine mediating effects is now the object of considerable criticism (Hayes, 2013). The study by Smith, Zanotti, Axelton, and Saucier (2011) on the relationships between beliefs about gay/lesbian etiology and political support for civil rights for GL persons encourage an investigation in this direction. It revealed that the more people think that the origin of homosexuality lies in the social environment, the more their attitudes toward GL persons are negative and, naturally, the less they support legislation in favor of this minority group. However, the mediating effect has not been examined for other important factors, such as religiosity, political orientation, and contact with GL persons.

Finally, an explanatory model focusing on direct effects, which does not take into account indirect effects, would lead to a form of impotence in the field of intervention since it suggests that there are few opportunities for raising public awareness about the importance of protecting and supporting

same-sex marriage and parenting. Indeed, beliefs about the etiology of homosexuality can be modified; however, essentialist beliefs are controversial and could be problematic bases for challenging sexual prejudice and promoting equal rights for sexual minorities (Haslam & Levy, 2006): indeed, biology can be synonymous with nature and therefore associated with more acceptance, but biology can also be synonymous with genetic and/or biological pathologies that could be fixed with medical advances. Moreover, interventions cannot aim to reduce religiosity, right-wing political orientation, or force people to get closer to sexual minorities. In France, the debates and arguments for and against the bill have mostly focused on the risks for children in being raised by same-sex parents, and on the prospect of legalization of surrogacy (Le Monde, 2013). Emphasizing a central role of sexual prejudice would encourage greater attention to the deconstruction of sexual prejudice as a tool to change attitudes toward same-sex marriage and parenting.

Additionally, exploring the role of sexual prejudice in these processes involves taking gender into account. Indeed, decades of research have shown an effect of gender on sexual prejudice, with men revealing more negative attitudes toward GL persons than women (Herek, 2009a). A consensual interpretation highlights the relatively higher status of the male gender role compared with the female gender role in society, so that men have more to lose when they step outside their gender role than women (Whitley & Kite, 2009). In addition, most studies that have examined the effect of gender on attitudes toward same-sex marriage (for example, Lee & Hicks, 2013; Merino, 2013; Todd & Ong, 2012) or same-sex parenting (for example, Becker, 2012; Hollekim et al., 2012; Sigillo et al., 2012; Webb, Chonody, & Kavanagh, 2017) have revealed more positive attitudes in women than in men. In this regard, it is likely that the effect of sexual prejudice depends on gender, and, to date, no study has examined such a moderating role of gender on the mediation effect of sexual prejudice.

The Current Study

Considering the potential influence of citizens' attitudes toward legislation supporting civil rights for GL persons, the current study focused on students' attitudes toward same-sex marriage and same-sex parenting during the period of debates on the opening of marriage and adoption to same-sex couples in France (2012–2013). The overall aim of this study was to provide a more complex understanding of attitudes toward same-sex marriage and parenting, focusing on three specific aims.

The first aim of this study was to examine the association between, on the one side, religiosity, political orientation, sexual prejudice, beliefs about the etiology of homosexuality, and

social contact with GL persons, same-sex couples, and same-sex parents and, on the other side, attitudes toward same-sex marriage and parenting. Previous considerations have led us to hypothesize that the higher the levels of sexual prejudice, religiosity, and beliefs that homosexuality is learned, the less participants are in favor of same-sex marriage and parenting. Conversely, the higher the levels of left-wing political orientation, the number of GL persons, same-sex couples, and same-sex parents known by participants, the more participants are in favor of same-sex marriage and parenting (H1).

The second aim of this study was to examine the mediating role of sexual prejudice on the association between, on the one side, religiosity, political orientation, beliefs about the etiology of homosexuality, and social contact with gay and lesbian persons, same-sex couples, and same-sex parents and, on the other side, attitudes toward same-sex marriage and parenting. Beyond the relationship between sexual prejudice and attitudes toward their civil rights, an analysis of the mediating role of sexual prejudice on the relationship between attitudes toward civil rights and relevant psychological variables could increase the value of interventions and arguments to be developed in this area, especially in highly religious or politically conservative persons. Thus, according to the literature on sexual prejudice, we hypothesized that sexual prejudice would reinforce the negative effects of religiosity and etiological beliefs and would reinforce the positive effects of left-wing political orientation, the number of GL persons known, and the number of same-sex couples known on attitudes toward same-sex marriage and parenting (H2).

The third aim of this study was to examine the moderating role of gender on the mediating role of sexual prejudice. Indeed, studies on the mediating role of sexual prejudice have not taken into account gender as a possible moderator of this mediating process, while a cluster of indications allows such a hypothesis. As gender appears an important key to better understanding these attitudes, and as sexual prejudice is higher in men than in women, we hypothesized a stronger mediating effect of sexual prejudice in the former than in the latter (H3).

Methods

Participants and Procedures

This study took place in France and focused on the French participants in the program *European Research on Heterosexual Attitudes toward Same-Sex Couples and Parented Families* run in seven European countries (Belgium, France, Greece, Italy, Poland, Portugal, Spain). Data were collected between April 2012 and November 2013. In France, on May 18, 2013, the President of the Republic introduced a bill to open marriage and adoption rights to same-sex couples, which was passed by the

National Assembly after 8 months of tumultuous debate in the Parliament and across the country. Data were collected online (through SurveyMonkey), in line with the regulations of the *National Commission on Informatics and Liberty* and ethical approval was granted by the University of Angers' Ethics Committee. A survey link was sent by e-mail to the students at the Universities of Nantes and Le Mans and the School for Advanced Study in the Social Sciences in Paris and posted on the website and the Facebook page of Paris Nanterre University. Informed consent was obtained from all individual participants included in the study.

In France, 2263 students participated. In order to avoid a language bias, participants were included in the final sample only if they were born in France and/or had French nationality. Moreover, in order to allow comparisons with previous international studies, participants were over 18 years old, enrolled in an undergraduate program as a minimum and were self-identified as heterosexual. The final sample included 1416 participants enrolled in more than 120 public or private French universities and schools and ranged in age from 18 to 59 ($M = 22.28$, $SD = 4.97$). Seventy percent were women (2 participants did not indicate their gender), 46.5% were single, separated or divorced, 31.1% were part of a non-cohabiting couple, 16.9% part of a cohabiting couple without marriage or civil partnership, and 5.5% part of a cohabiting couple with marriage or civil partnership (3 participants did not indicate their marital status); 65 participants were parents of at least one child (4.6% of the sample). Religious affiliation included Catholicism (29%), Atheism/Agnosticism (35%), other affiliations (7%), and no affiliation (29%). Almost all participants had French citizenship (99.7%); information about ethnic background was not available. Based on information provided about their field of study, participants were categorized into 3 main fields (48 participants did not provide this information): Human and Social Sciences (53.6%), Sciences (17%), and Law (14.8%). An "Other Fields" category was created for students outside these three main fields (14.6%). Given the difference in the school and university systems in the seven countries covered by the study, standard items were created to measure their educational level ("What is the highest level of education you have completed?" and "How many years have you been in education since the age of 6?"), but for some participants, the responses to these two items were mutually inconsistent or inconsistent with the age of the participant. As the answers appeared unreliable, these items were excluded from the analyses.

Measures

Demographic Information and Period of Data Collection

Participants reported their age, gender, marital status, parental status, and field of study. As data were collected between April 2012 and November 2013 and the President of the

Republic introduced a bill opening marriage and adoption rights to same-sex couples on May 18, 2013, we created a variable named "period of data collection" with two categories which represented respectively participants who completed the questionnaire before this date and participants who completed it on or after this date. These categories respectively accounted for 85.5 and 14.5% of the total sample.

Religiosity Religiosity was assessed with two items: "How often do you attend religious services?" (response options range from 1 (*never*) to 6 (*once a week or more*) and "How important is religion for you?" (response options ranged from 1 (*not important at all*) to 6 (*extremely important*)). Due to the high correlation between these items ($r = .67$, $p < .001$), we combined them into a single variable by computing the mean. Higher average scores represented greater religiosity.

Political Orientation In France, political orientation is most often described as extending from extreme left to extreme right (in contrast to the positioning of conservative to liberal used in North America and international research). These terms, which are used in international research literature, are little used in France, where political movements are more usually identified across a range extending from extreme left to extreme right. Above and beyond the cultural and historical reasons that explain these differences, one can add that French political parties may have a liberal position on certain questions, economics for example, while at the same time having a conservative position on others, like societal issues. In this study, political orientation was assessed with a single item: "What is your political orientation from left-wing to right-wing?" (response options ranged from 1 (*extremely right-wing*) to 5 (*extremely left-wing*)). This variable was called "left-wing orientation" as the highest score represented an extremely left-wing political orientation.

Social Contact Social contact with GL persons was assessed with seven items. Three of them assessed the number of gay and lesbian persons known among their family members, friends, and colleagues. In order to limit multicollinearity problems, we combined these three items into a single variable named "number of GL persons known." To date, previous studies have not taken into account social contact with same-sex couples and same-sex families. Thus, two items of the seven items assessing the number of gay and lesbian couples they knew were combined into a single variable named "number of same-sex couples known." Finally, the two remaining items assessing the number of same-sex families headed by gay couples and by lesbian couples they knew were combined into a single variable named "number of same-sex parents known." For each of the three variables created, response options ranged from 0 to 10.

Sexual Prejudice Negative attitudes toward GL persons were assessed with the short version of the “Attitudes Toward Gays and Lesbians” scale (ATLG) (Herek, 1998): five items assessed negative attitudes toward gay men and five items assessed negative attitudes toward lesbians (e.g., “male/female homosexuality is a perversion”). The 10 items were submitted to a principal axis factor analysis with an orthogonal rotation, and a single factor was found to account for 60% of the variance and included the 10 items, with factor loadings ranging from 0.66 through 0.94. For these items, the response options ranged from 1 (*strongly disagree*) to 4 (*strongly agree*). The internal consistency for this factor was $\alpha = 0.92$. We combined the 10 items into a single variable, and higher average scores represented higher levels of sexual prejudice.

Beliefs about the Etiology of Homosexuality Five items were used to assess beliefs about the etiology of homosexuality (*General Attitudes toward Homosexuality*, Costa, Caldeira, Fernandes, Rita, Pereira, & Leal, 2013: item 1, “Homosexuality is a choice”; item 2, “Parents play an important role in their children’s sexual orientation”; item 3, “Homosexuality is learned through contact with homosexual people”; item 4, “Homosexuality has a biological basis (hormonal or genetic) and thus cannot be changed”; item 5, “Homosexuality is as natural as heterosexuality”). After a reverse-coding transformation applied to items 4 and 5, the five items were submitted to a principal axis factor analysis with an orthogonal rotation. The first factor accounted for 28% of the variance and included items 2, 3, and 5, with factor loadings ranging from 0.61 through 0.65. The second factor accounted for an additional 9.5% of the variance and included items 1 and 6, with factor loadings respectively 0.67 through 0.33. The internal consistency was moderate for the first factor ($\alpha = 0.67$) but not acceptable for the second factor ($\alpha = 0.35$). We finally combined items 2, 3, and 5 into a single variable measuring beliefs that homosexuality is learned. Response options ranged from 1 (*strongly disagree*) to 4 (*strongly agree*). Higher average scores represented greater belief of the fact that homosexuality is learned.

Attitudes toward Same-Sex Marriage Participants’ position toward same-sex marriage was assessed with a single item (“How supportive or unsupportive are you of same-sex marriage now”), response options ranged from 1 (*extremely unsupportive*) to 6 (*extremely supportive*) (Katzuny & Green, 2014). Higher average scores represented greater support for same-sex marriage.

Attitudes toward Same-Sex Parenting Attitudes toward same-sex parenting were assessed with eight items from the “D’Amore and Green on Same-Sex Parenting” scale (D’Amore & Green, 2012) (e.g., “In terms of the child’s well-being, how do you view adoption by gay men?”).

Response options ranged from 0 (always wrong) to 3 (*not wrong at all*) with an additional “I don’t know” response (considered as missing data). The eight items were submitted to a principal axis factor analysis with an orthogonal rotation and a single factor was found to account for 86% of the variance and included the eight items, with factor loadings ranging from 0.73 through 0.96. The internal consistency for this factor was $\alpha = 0.97$. We combined the eight items into a single variable, and higher average scores represented more positive attitudes toward same-sex parenting.

Results

Group Differences and Basic Associations

Prior to our analysis, we combined our two dependent variables (i.e., attitudes toward same-sex marriage and attitudes toward same-sex parenting) due to the high significant correlation ($r = .81, p < .001$) and thus created a unique variable of attitudes toward same-sex marriage and parenting (ASSMP) by computing the mean of the two scores. From this perspective, as the two scores were assessed on different scales, we first standardized it (score Z , with $M = 0, SD = 1$) and then transformed it into a T score ($M = 50, SD = 10$) in order to avoid negative values and thus provide more understandable graphic representation. Higher average scores represented more positive ASSMP. Moreover, as participants in cohabiting couples represented less than 23% of the sample, we decided to add them to the non-cohabiting couples in order to create a “couple” category. This new category was thus opposed to single participants. Single and coupled participants respectively accounted for 46.5 and 53.5% of the total sample.

A multivariate analysis of variance on scores of sexual prejudice and ASSMP revealed a significant effect of period of data collection (Wilks’s $\Lambda = 0.98, F(2, 1291) = 16.61, p < .001, \eta_p^2 = 0.03$), gender (Wilks’s $\Lambda = .99, F(2, 1291) = 4.25, p < .05, \eta_p^2 = 0.01$), marital status (Wilks’s $\Lambda = 0.99, F(2, 1291) = 4.05, p < .05, \eta_p^2 = 0.01$), parental status (Wilks’s $\Lambda = 0.98, F(2, 1291) = 13.82, p < .001, \eta_p^2 = 0.02$), and field of study (Wilks’s $\Lambda = 0.98, F(6, 2582) = 4.34, p < .001, \eta_p^2 = 0.01$). Table 1 contains means and standard deviations. Univariate analyses of variance showed that participants who completed online questionnaires before the SSMP law was passed reported lower levels of sexual prejudice, $F(1, 1292) = 30.30, p < .001, \eta_p^2 = 0.02$, and higher levels of ASSMP, $F(1, 1292) = 23.95, p < .001, \eta_p^2 = 0.02$, than participants who completed online questionnaires since the SSMP law was passed. Women reported lower levels of sexual prejudice, $F(1, 1292) = 7.42, p < .01, \eta_p^2 = 0.01$, and higher levels of ASSMP, $F(1, 1292) = 6.62, p < .05, \eta_p^2 = 0.01$, than men.

Table 1 Descriptive statistics

	Sexual prejudice	ASSMP
Period of data collection		
Before SSMP law	1.45 (0.52)	50.49 (9.03)
Since SSMP law	1.60 (0.76)	48.16 (11.31)
Gender		
Female	1.41 (0.49)	51.44 (8.15)
Male	1.62 (0.70)	47.01 (11.40)
Marital status		
Single	1.49 (0.58)	49.97 (9.75)
Couple	1.45 (0.55)	50.30 (9.14)
Parental status		
Non-parent	1.46 (0.53)	50.38 (9.18)
Parent	1.83 (0.01)	44.16 (13.11)
Field of study		
HSS	1.38 (0.48)	52.09 (7.53)
Sciences	1.57 (0.65)	48.17 (10.46)
Law	1.62 (0.67)	46.70 (11.43)
Other	1.54 (0.56)	48.76 (10.51)
Total	1.47 (0.56)	50.00 (10.00)

Values are average scale scores, and values in parentheses represent standard deviations

ASSMP attitudes toward same-sex marriage and parenting (T score)

Non-parent participants reported lower levels of sexual prejudice, $F(1, 1292) = 27.59, p < .001, \eta_p^2 = 0.02$, and higher levels of ASSMP, $F(1, 1292) = 13.25, p < .001, \eta_p^2 = 0.01$, than parents. Finally, Tukey post hoc tests for field of study revealed that students of Human and Social Sciences (HSS) reported lower levels of sexual prejudice, $F(3, 1292) = 6.33, p < .001, \eta_p^2 = 0.01$, and higher levels of ASSMP, $F(3, 1292) = 7.92, p < .001, \eta_p^2 = 0.02$, than students of Sciences, Law, and Other Fields of study.

In order to test H1, correlations among continuous variables including age were calculated (Table 2). With the exception of age, the correlations between ASSMP and the other variables were significant, supporting H1. Indeed, the higher levels of sexual prejudice ($r = -.70, p < .01$), religiosity ($r = -.53, p < .01$), and beliefs that homosexuality is learned ($r = -.64, p < .01$), the less participants are in favor of same-sex marriage and parenting. Moreover, the higher levels of left-wing political orientation ($r = -.70, p < .01$), number of GL persons ($r = .19, p < .01$), same-sex couples ($r = .14, p < .01$), and same-sex parents ($r = .06, p < .05$) known by participants, the more participants are in favor of same-sex marriage and parenting.

Mediation and Moderated Mediation Effects

Mediation analysis consists in testing a causal sequence in which a predictor influences a mediator, which in turn influences an outcome. This approach focuses on the indirect effect which represents how the outcome is influenced by the predictor. The widely used “causal steps method,” developed by Baron and Kenny (1986), has been recently criticized especially because this procedure does not require any kind of inferential test on the indirect effects but logically infers the existence of an indirect effect from the outcome of a set of null hypothesis tests (for extensive critics and explanations, see Hayes, 2013). To face these limitations, Hayes (2013) developed a macro for SPSS and SAS that allows us to examine a hypothesis of an indirect effect (i.e., the effect of an independent variable on a dependent variable through a mediator) with a single inferential test providing confidence intervals. In line with this approach, Hayes (2015) developed a *conditional process analysis* for testing moderated mediating effects.

From this perspective, in order to test H2, we first tested six mediation models (one for each independent variable) with the PROCESS macro for SPSS (model 4) (Hayes, 2013), controlling for the other independent variables, and for period of data collection and age, gender, marital status,¹ parental status, and field of study of participants. In order to test H3 for those of the models with a significant indirect effect at the mediation analysis, we then performed a conditional process analysis using the covariables mentioned above, by adding gender as a moderator of indirect effects (model 58 in PROCESS, see Fig. 1). Finally, when a conditional indirect effect was significant, we examined it at values of the moderator (i.e., distinctively for women and for men). In both mediation analyses and moderated mediation analyses, effects were calculated using 10,000 bootstrapping samples, generating 95% confidence intervals of the bias-corrected bootstrap type, and were considered significant when 0 fell out of the confidence interval (Hayes, 2015). Before we performed these analyses, we assessed multicollinearity between independent and control variables by examining the variance inflation factor (VIF), which indicated no multicollinearity problem ($1.06 < \text{VIFs} < 2.41$).

Table 3 contains results for the models with religiosity, political orientation, or etiological beliefs as independent variables, and Table 4 contains results for the models with number of GL persons known, number of same-sex couples known, or number of same-sex parents known as independent variables. For moderated mediation models, only indirect

¹ As mentioned above, marital status was considered as a two-category variable (single vs coupled participants). Moderated mediational analyses with marital status as a three-category variable (single, non-married couples, married couples) were also performed and revealed similar results to those presented here.

Table 2 Correlations between variables

	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Age of participants	22.28	4.97	–								
2. ASSMP	50.00	10.00	–0.02	–							
3. Sexual prejudice	1.48	0.57	0.03	–0.70**	–						
4. Religiosity	1.81	1.01	0.06*	–0.53**	0.48**	–					
5. Left-wing orientation	3.41	1.02	0.11**	0.51**	–0.40**	–0.34**	–				
6. Etiology beliefs	1.68	0.64	0.01	–0.64**	0.65**	0.42**	–0.34**	–			
7. Number of GL persons known	2.78	1.15	0.07*	0.19**	–0.20**	–0.04	0.14**	–0.14**	–		
8. Number of same-sex couples known	1.76	1.00	0.19**	0.14**	–0.14**	–0.03	0.11**	–0.07**	0.42**	–	
9. Number of same-sex parents known	1.10	0.29	0.01	0.06*	–0.07**	–0.02	0.07**	–0.02	0.16**	0.30**	–

ASSMP attitudes toward same-sex marriage and parenting (T score)

* $p < .05$; ** $p < .01$

conditional effects are presented (some coefficients of indirect effects slightly changed from mediation analyses to moderated mediation analyses, but significance patterns were similar).

Mediation analyses partly supported H2. Mediation analyses results revealed significant direct effects on ASSMP for religiosity ($B = -1.54$, $p < .001$), left-wing political orientation ($B = 1.92$, $p < .001$) and etiological beliefs ($B = -3.61$, $p < .001$), and number of same-sex couples ($B = 0.35$, $p < .05$) and non-significant direct effects for number of GL persons ($B = 0.18$, $p > .05$) and number of same-sex parents ($B = 0.53$, $p > .05$). As for the mediator, it appears that higher levels of sexual prejudice were significantly associated with lower levels of ASSMP ($B = -5.88$, $p < .001$). Finally, indirect effects of religiosity ($B = -0.77$, $p < .05$), political orientation ($B = 0.45$, $p < .05$), etiological beliefs ($B = -2.56$, $p < .05$), number of GL persons ($B = 0.23$, $p < .05$), and number of same-sex couples known ($B = 0.16$, $p < .05$) on ASSMP through sexual prejudice were significant, and the indirect effect of number of same-sex parents known was non-significant ($B = -0.01$, $p > .05$). Moreover, higher levels of religiosity ($B = 0.13$, $p < .001$) and etiological beliefs ($B =$

0.43 , $p < .001$) were associated with higher levels of sexual prejudice. Higher levels of left-wing political orientation ($B = -0.08$, $p < .001$), number of GL persons known ($B = -0.04$, $p < .001$), and number of same-sex couples known ($B = -0.03$, $p < .001$) were associated with lower levels of sexual prejudice.

As no mediation effect was found for the number of same-sex parents known, no moderated mediation analysis was performed for this independent variable. The moderated mediation analyses, looking at the moderating role of gender on the mediation effects, supported H3. Firstly, we found that sexual prejudice mediated the effect of religiosity ($B = -1.00$, $p < .05$), left-wing political orientation ($B = 0.43$, $p < .05$), and etiological beliefs ($B = -0.90$, $p < .05$) on ASSMP in both women and men, with a stronger mediation effect in men (respectively, $B = -1.39$, $p < .05$, $B = 0.73$, $p < .05$, and $B = -3.12$, $p < .05$) than in women (respectively, $B = -0.39$, $p < .05$, $B = 0.30$, $p < .05$, and $B = -2.21$, $p < .05$). Secondly, we found that sexual prejudice mediated the effects of number of GL persons known ($B = 0.38$, $p < .05$) and number of same-sex couples known ($B = 0.51$, $p < .05$) on ASSMP in men (number of GL persons known, $B = 0.55$, $p < .05$; number of same-sex couples known, $B = 0.49$, $p < .05$) but not in women (number of GL persons known, $B = 0.11$, $p > .05$; number of same-sex couples known, $B = 0.04$, $p > .05$).

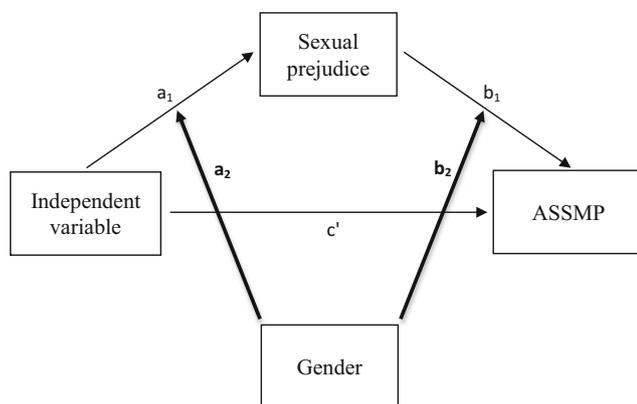


Fig. 1 Moderated mediation model with sexual prejudice as mediator and gender as moderator. Note. ASSMP = attitudes toward same-sex marriage and parenting

Discussion

This study aimed to extend knowledge about the mediation role of sexual prejudice moderated by gender, on the effects of the main factors of attitudes toward same-sex marriage and parenting identified in the literature.

Regarding our first aim focusing on the association between such attitudes and the factors examined here, the findings support previous findings: the higher the levels of sexual prejudice, religiosity, and beliefs that homosexuality is

Table 3 Effects of mediation and moderated mediation analyses for religiosity, political orientation or etiological beliefs as independent variable

Effect ^a	Outcome	Independent variable (IV)					
		Religiosity		Political orientation		Etiological beliefs	
		B (SE)	95% CI	B (SE)	95% CI	B (SE)	95% CI
Mediation analysis							
IV (a_1)	SP	0.13 (0.01)***	[0.10, 0.16]	-0.08 (0.01)***	[-0.10, -0.05]	0.43 (0.02)***	[0.38, 0.48]
Sexual prejudice (SP) (b_1)	ASSMP	-5.88 (0.47)***	[-6.80, -4.95]	-5.88 (0.47)***	[-6.80, -4.95]	-5.88 (0.47)***	[-6.80, -4.95]
Direct effect of IV (c')	ASSMP	-1.54 (0.27)***	[-2.08, -1.00]	1.92 (0.22)***	[1.48, 2.36]	-3.61 (0.41)***	[-4.41, -2.81]
Indirect effect	ASSMP	-0.77 (0.12)*	[-1.03, -0.57]	0.45 (0.09)*	[0.28, 0.64]	-2.56 (0.26)*	[-3.12, -2.07]
Moderated mediation analysis ^b							
Gender X IV (a_2)	SP	0.15 (0.02)***	[0.11, 0.20]	-0.06 (0.02)**	[-0.11, -0.02]	0.10 (0.04)**	[0.03, 0.18]
Gender X SP (b_2)	ASSMP	-0.65 (0.60)	[-1.84, 0.53]	-0.65 (0.60)	[-1.84, 0.53]	-0.65 (0.60)	[-1.84, 0.53]
Conditional indirect effect	ASSMP	-1.00 (0.21)*	[-1.43, -0.60]	0.43 (0.18)*	[0.07, 0.80]	-0.90 (0.42)*	[-1.71, -0.06]
Among women	ASSMP	-0.39 (0.10)*	[-0.61, -0.20]	0.30 (0.10)*	[0.13, 0.51]	-2.21 (0.29)*	[-2.82, -1.68]
Among men	ASSMP	-1.39 (0.20)*	[-1.82, -1.03]	0.73 (0.17)*	[0.43, 1.10]	-3.12 (0.39)*	[-3.90, -2.37]

For each model, the other IVs, period of data collection, age, gender, marital status, and parental status were controlled. *B* values are unstandardized regression coefficients

IV independent variable, ASSMP attitudes toward same-sex marriage and parenting, CI confidence interval, SE standard error

^a Paths on Fig. 1 are given in parentheses

^b For parsimony reasons, only interaction effects and conditional indirect effect are reported. The significance of the effect of IVs on sexual prejudice (a_1), sexual prejudice on ASSMP (b_2), and IVs on ASSMP (c') did not change from the mediation analyses to the moderated mediation analyses

* $p < .05$; ** $p < .01$; *** $p < .001$

learned, the less participants are in favor of same-sex marriage and parenting; the higher the levels of left-wing political orientation, number of GL persons, same-sex couples, and same-sex parents known by participants, the more participants are in favor of same-sex marriage and parenting. Moreover, the results suggest a hierarchy of associations. Indeed, ASSMP was strongly associated with attitudes related to homosexuality (sexual prejudice, etiological beliefs), less strongly associated with ideologies (religiosity, political orientation), and weakly associated with the contact variables. In particular, the number of same-sex parents known was very weakly associated with ASSMP but significant due to a large sample size. The literature reports few studies on the issue, but this result seems relatively consistent with the work of Morse et al. (2007) showing that contact with same-sex parents was not associated with the evaluation of parenting competencies in same-sex parents nor with the perception of the risks for their children of being raised in this family context. However, to date, knowledge has not been sufficient to minimize the effect of contact with same-sex parents on attitudes toward same-sex marriage and parenting. In fact, Morse et al. (2007) used a dichotomous variable to assess contact with same-sex parents (yes versus no) that does not take into account neither the quantity nor the quality of these contacts. Moreover, it must be noted that the present study does not take into account the quality of contacts, that the average number of same-sex parents known by

the participants in our sample was extremely low, and that the variability between participants was probably too weak to highlight such links. Moreover, previous studies indicate that the higher the number of GL persons known, the stronger are the positive effects of social contact on attitudes (Herek, 2009a), provided that these relations are sufficiently close (Herek & Capitano, 1996), and our study focused on the number of GL persons, same-sex couples, and same-sex parents known by the participants, not on the degree of closeness and intimacy with them. It could also be hypothesized that contact with same-sex parents is not so informative and that GL persons and same-sex couples provide enough information about GL persons' lifestyles, leading people to understand that they are able to provide a safe environment for children. In the future, this issue will deserve further investigation.

Regarding our second and third aims, except for the number of same-sex parents known which we discussed above, the results highlight the mediation role of sexual prejudice but also reveal that this role depends on the gender of participants. In line with previous findings (Becker, 2012; Hollekim et al., 2012; Lee & Hicks, 2013; Merino, 2013; Sigillo et al., 2012; Todd & Ong, 2012), men were less favorable to same-sex marriage and parenting than women but, above all, two different patterns of results appear, based on the moderation role of gender. The first pattern reveals that sexual prejudice

Table 4 Effects of mediation and moderated mediation analyses for number of G/L persons, same-sex couples, or same-sex parents known as independent variable

Effect ^a	Outcome	Independent variable (IV)					
		Number of gay/lesbian persons known		Number of same-sex couples known		Number of same-sex parents known	
		B (SE)	95% CI	B (SE)	95% CI	B (SE)	95% CI
Mediation analysis							
IV (a_1)	SP	−0.04 (0.01)***	[−0.02, 0.10]	−0.03 (0.01)*	[0.02, 0.67]	0.01 (0.05)	[−0.09, 0.09]
Sexual prejudice (SP) (b_1)	ASSMP	−5.88 (0.47)***	[−6.80, −4.95]	−5.88 (0.47)***	[−6.80, −4.95]	−5.88 (0.47)***	[−6.80, −4.95]
Direct effect of IV (c')	ASSMP	0.18 (0.16)	[−0.12, 0.49]	0.35 (0.16)*	[0.02, 0.67]	0.53 (0.62)	[−0.69, 1.75]
Indirect effect	ASSMP	0.23 (0.07)*	[0.10, 0.37]	0.16 (0.08)*	[0.01, 0.32]	−0.01 (0.27)	[−0.56, 0.52]
Moderated mediation analysis ^b							
Gender X IV (a_2)		−0.06 (0.02)**	[−0.10, −0.02]	−0.08 (0.03)**	[−0.13, −0.03]		
Gender X SP (b_2)		−0.65 (0.60)	[−1.84, 0.53]	−0.65 (0.60)	[−1.84, 0.53]		
Conditional indirect effect	ASSMP	0.38 (0.14)*	[0.11, 0.68]	0.51 (0.15)*	[0.22, 0.83]		
Among women	ASSMP	0.11 (0.07)	[−0.02, 0.26]	0.04 (0.08)	[−0.12, 0.20]		
Among men	ASSMP	0.49 (0.13)*	[0.26, 0.78]	0.55 (0.14)*	[0.29, 0.86]		

For each model, the other IVs, period of data collection, age, gender, marital status, and parental status were controlled. As mediation test was not significant for number of same-sex parents known, no moderated mediation analysis was performed for this independent variable. *B* values are unstandardized regression coefficients

IV independent variable, ASSMP attitudes toward same-sex marriage and parenting, CI confidence interval, SE standard error

^a Paths on Fig. 1 are given in parentheses

^b For parsimony reasons, only interaction effects and conditional indirect effect are reported. The significance of the effect of IVs on sexual prejudice (a_1), sexual prejudice on ASSMP (b_2), and IVs on ASSMP (c') did not change from the mediation analyses to the moderated mediation analyses

* $p < 0.05$; ** $p < .01$; *** $p < .001$

reinforced the negative effects of religiosity and etiological beliefs and the positive effects of left-wing political orientation on attitudes about same-sex marriage and parenting, but more strongly in men than in women. The second pattern reveals that sexual prejudice reinforced the positive effects of number of GL persons known and number of same-sex couples known on attitudes about same-sex marriage and parenting in men but not in women.

As mentioned above, the issue of the mediation effect of sexual prejudice moderated by gender was not addressed as such in the literature, which only delivers segmented information. Indeed, concerning the effect of sexual prejudice on attitudes toward same-sex marriage and parenting (see path b_2 , Fig. 1), Moskowitz et al. (2010) showed that this association was not moderated by gender. Our results are in line with this finding and highlight that, in fact, models of moderated moderation are significant because gender moderates the effect of the independent variables on sexual prejudice. Concerning this latter part of the models (see path a_2 , Fig. 1), available data are quite scattered in the literature. Baunach, Burgess, and Muse (2010) indicated that religiosity has similar effects on sexual prejudice for male and female, while our results revealed a stronger effect in males than in females. Baunach, Burgess, and Muse (2010) also showed that having at least

one gay or lesbian friend reduces sexual prejudice for both male and female students, with a larger and stronger effect for male respondents, and that having at least one gay or lesbian family member has no significant effect on sexual prejudice, whatever the participants' gender. These findings showing an asymmetry between men and women are partly in line with our results which indicated that this effect exists in men and not in women, but the comparison with this study is not totally appropriate because our variable aggregates contact with family members, friends, and colleagues.

Adherence to gender norms could be central in these processes. Indeed, the literature on sexual prejudice shows that men hold more negative attitudes toward GL persons than women (Herek, 2009a), especially because they are under greater pressure to maintain and defend their masculine status, which is over-valued in society compared to feminine status (Whitley & Kite, 2009). Unlike women, men learn from societal norms that they have to be dominant and not submissive, masculine and not feminine. Of course, women are also under the influence of gender norms, but they are more flexible with respect to them, especially since these norms often disadvantage them in their daily lives (employment, household tasks, wages, etc.) (Munoz Boudet, Petesch, Turk, & Thumala, 2012). Concerning religiosity, religious discourse advocates

the importance of gender difference and the importance of maintaining different roles and functions for each gender (Béraud, 2013). People with a high level of religiosity are also likely to be exposed to discourses based on sacred texts which, in many religions, argue that homosexuality is an abomination. In fact, in religious discourses and texts, male homosexuality is more stigmatized than feminine homosexuality, which is rarely addressed by religions. As a consequence, sexual prejudices can be expected to be more sensitive to religious discourses in men than in women, as suggested by our results. Concerning political orientation, right-wing persons tend to be more conservative with regard to individual rights and prefer tradition to social progress (Jost et al., 2009). Although men are under special pressure to respect these standards and to ensure that these traditional gender norms are respected in society, which is less true for women, politically left-wing men could feel less pressured by these norms and thus they do not need sexual prejudice to defend their masculine status. The moderated effect of gender on the association between etiological beliefs and sexual prejudice can also be examined from the standpoint of gender norms: studies on the issue are rare; however, McCutcheon and Morrison (2015) show that the more people believe that homosexuality is acquired, the more they adhere to traditional gender norms, without indicating whether this correlation is different between men and women. Gay men and, to a lesser extent, lesbian women are perceived to demonstrate opposite-sex characteristics (Blashill & Powlishta, 2009; Kite & Deaux, 1987; McCreary, 1994). Thus, believing that sexual orientation can be fluctuating, resulting from a choice, or that it is learned, could lead individuals who strongly adhere to traditional gender norms to fear porosity between masculinity and femininity. From the functional perspective (Herek, 2009a), sexual prejudice could play a defensive role against the jeopardization of gender norms, especially among men because of the social overvaluation of masculinity. Further investigation is needed to test the mediation role of adherence to traditional gender norms on the association between etiological beliefs and sexual prejudice.

Finally, having contacts with gay and lesbian people or couples leads them to realize that masculine gender norms are not jeopardized by these groups, or even makes their normative representation of gender more flexible, which reduces their sexual prejudice. In women, the defensive function of sexual prejudice is less prevalent (Herek & Capitanio, 1999); as a consequence, contacts appear to have little effect on their attitudes toward GL persons who do not represent such a threat to femininity.

Overall, these results raise perspectives on attitudes toward same-sex marriage and parenting. Firstly, they support the hypothesis that these attitudes are not completely underpinned by the adherence to a traditional family model supposed to provide the only satisfying environment for children. Indeed,

the effect of ideologies such as religiosity and political orientation on attitudes toward same-sex marriage and parenting is partly due to sexual prejudice. In other words, contrary to what the opponents claimed in France, one can assume that this opposition by right-wing circles is partly based on sexual prejudice. By highlighting the mediation role of sexual prejudice, the findings of the current study increase the need to reduce sexual prejudice. Secondly, highlighting these moderation effects is encouraging changing of attitudes toward same-sex parents and their children in religious and right-wing-oriented circles. Indeed, while it is worrying that sexual prejudice persists or is amplified in a context of social debate about social equality for sexual minorities, the effect of ideologies, mostly religious ideologies, must be able to be reduced. The work of many associations is a deep and long-term effort to liberalize the principles dictated and defended by religious or political institutions. However, considering things from the individual's point of view, interventions designed to change attitudes cannot aim to alter any person's religious or political orientation. As sexual prejudice mediates the effect of religiosity and these attitudes, then reducing sexual prejudice in these specific groups would make them less inconsistent with support for advances in sexual minorities' civil rights. This highlights the need to deconstruct negative beliefs about homosexuality during debates, even when prejudice against homosexuality itself is not explicit in opponents' discourse. In line with this, interventions also need to deconstruct the erroneous beliefs about the etiology of homosexuality. One very concrete application consists in stating that homosexuality, like heterosexuality or bisexuality, does not result from a choice but from a mix of genetic, biological, and social factors (American Psychological Association, 2008; Perrin, 2002), and certainly not from the pressure of trends, and that even if sexual behaviors could be controlled, sexual orientation itself is not controllable. However, we must remain cautious about the representations that individuals make of the innate character of homosexuality. As stated above, essentialist beliefs represent a double-edged sword in that biological conception of homosexuality could reinforce a medical pathologization with new form of "therapies," for example gene therapies. Thus, it seems prudent in intervention to mention the scientific knowledge that does not allow establishing a consensus about the etiology of homosexuality, which may have biological and social origins, possibly interacting with each other, like many other psychological characteristics.

From an interventional point of view, it seems difficult to intervene concretely in people's social environment by encouraging them to develop preferential relationships with GL persons when they do not know any such people, but companies and institutions such as schools or universities can be encouraged to promote diversity and inclusion. Public opinion plays a fundamental role in the ongoing advancement of minority sexual rights as citizen attitudes, and

especially students' attitudes, participate in supporting, rejecting, even determining the nature of bills concerning recognition of same-sex unions and families. Interventions should be particularly offered to students, particularly with regard to their future professional integration, which will lead many of them to interact with sexual minorities. For several years, the first author has developed specific teachings at his university, one devoted to sexual prejudice (undergraduate psychology program), and the other devoted to same-sex parenting (master developmental psychology program). However, to our knowledge, these curricula remain exceptions in French higher education. Finally, it is also possible to intervene indirectly by encouraging the visibility of GL persons and by working to promote a social climate that is more favorable to this visibility. The literature on the effect of parasocial contact on attitudes toward sexual minorities (Bonds-Raacke, Cady, Schlegel, Harris, & Firebaugh, 2007; Schiappa, Gregg, & Hewes, 2005; Schiappa, Gregg, & Hewes, 2006) also suggests that providing positive models of such families through the media would help to improve attitudes toward same-sex marriage and parenting.

Strengths, Limitations, and Future Research

The current study provides knowledge in an international context with more and more countries engaging in debate about same-sex unions and/or parenting. It provides a better understanding of the process that links public opinions on same-sex couples and families with religiosity, political orientation, beliefs about the etiology of homosexuality, and contact with gay men and lesbians. Based on a large sample, the analysis of mediation and moderated mediation models relies on a more robust approach than previous studies, and also helps to highlight in an even more precise way the role of gender in attitudes toward same-sex marriage and parenting.

Several limitations to this study should be addressed. Firstly, the design of the present study was cross-sectional; therefore, the results should be interpreted cautiously especially considering the mediation processes. Secondly, data were collected in France during the period of debates concerning the opening of marriage and adoption to same-sex couples, participants were self-selected, and a social desirability bias was likely to occur. The large demonstrations against the bill, with an offensive discourse against sexual minorities and their families, probably led to a crystallization of public opinion. Thirdly, due to legal reasons, information about ethnic diversity was not collected. Finally, the data did not allow us to run a separate analysis for attitudes toward same-sex marriage and attitudes toward same-sex parenting, probably due to the proximity or confusion of these aspects in the debates at the time of the data collection in France. It would be useful to replicate this study in countries where marriage, but not same-sex parenting, is already legal.

Changes in legislation in favor of the civil rights of sexual minorities such as marriage and parenting are essential because the legal context and the social climate are associated with GL persons' psychological well-being. In an attempt to better understand the psychological process involved in attitudes toward these rights, future research should examine participants' more general values in terms of adherence to traditional couple and family models and the extent to which these models appear more suitable for society and children's well-being. Indeed, exploring attitudes toward the other forms of non-traditional families such as single-parent families or step-families (same-sex families included) could enable us to identify the role of sexual prejudice in the attitudes of specific groups with a high degree of religiosity or right-wing orientation, for example.

The movements granting and protecting civil rights for sexual minorities are highly supported by arguments on the safety of the same-sex union and parenting context for child development and arguments about the psychological benefits for people more directly concerned. However, explicit arguments that contradict sexual prejudice occurring in debates about these issues should not be neglected. Laws and policy makers should not only focus on the aims and technical aspects of such laws, and on its consequences for the populations concerned and society as a whole, as was the case during the debates in France in 2012 and 2013. As sexual prejudice appears to be part of the process that leads individuals to reject/support such advances, laws and policy makers should also strive to support public opinion toward accepting these advances by explicitly deconstructing in advance the prejudices which target GL persons, even if these prejudices seem to them unusual or rare in society.

Compliance with Ethical Standards

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

References

- Allport, G. W. (1954). *The nature of prejudice*. Cambridge: Perseus.
- American Psychological Association. (2008). *Answers to your questions: For a better understanding of sexual orientation and homosexuality*. Washington, DC: Author. Retrieved from www.apa.org/topics/orientation.pdf.
- American Psychological Association. (2011). Resolution on marriage equality for same-sex couples. Retrieved from <http://www.apa.org/about/governance/council/policy/same-sex.pdf>.

- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>.
- Barth, J., Overby, L. M., & Huffmon, S. H. (2009). Community context, personal contact, and support for an anti-gay rights referendum. *Political Research Quarterly*, *62*(2), 355–365. <https://doi.org/10.1177/1065912908317033>.
- Barth, J., & Parry, J. (2009). $2 > 1 + 1$? The impact of contact with gay and lesbian couples on attitudes about gay/lesbians and gay-related policies. *Politics & Policy*, *37*, 31–50. <https://doi.org/10.1111/j.1747-1346.2007.00160.x>.
- Baunach, D. M., Burgess, E. O., & Muse, C. S. (2010). Southern (dis-)comfort: Sexual prejudice and contact with gay men and lesbians in the south. *Sociological Spectrum*, *30*(1), 30–64.
- Becker, A. B. (2012). What's marriage (and family) got to do with it? Support for same-sex marriage, legal unions, and gay and lesbian couples raising children. *Social Science Quarterly*, *93*, 1007–1029. <https://doi.org/10.1111/j.1540-6237.2012.00844.x>.
- Béraud, C. (2013). Les catholiques contre le genre. L'épisode des manuels de SVT [Catholics against gender. The episode of SVT handbooks]. In F. Rochefort & M.-E. Sanna (Eds.), *Normes religieuses et genre [Religious norms and gender]* (pp. 109–122). Paris: Armand Colin.
- Béraud, C. (2015). Un front commun des religions contre le mariage pour tous? [A common front of religions against marriage for all]. *Contemporary French Civilization*, *39*(3), 335–349. <https://doi.org/10.3828/cfc.2014.20>.
- Blashill, A., & Powlishta, K. (2009). Gay stereotypes: The use of sexual orientation as a cue for gender-related attributes. *Sex Roles*, *61*(11/12), 783–793. <https://doi.org/10.1007/s11199-009-9684-7>.
- Bonds-Raacke, J. M., Cady, E. T., Schlegel, R., Harris, R. J., & Firebaugh, L. (2007). Remembering gay/lesbian media characters: Can Ellen and Will improve attitudes toward homosexuals? *Journal of Homosexuality*, *53*(3), 19–34. https://doi.org/10.1300/J082v53n03_03.
- Carroll, A. (2016). *State-sponsored homophobia 2016: A world survey of sexual orientation laws: criminalisation, protection and recognition*. International Lesbian Gay Bisexual Trans and Intersex Association. Retrieved from <https://ilga.org/state-sponsored-homophobia-report-2016-ILGA>.
- Carroll, A., & Mendos, L. R. (2017). *State-sponsored homophobia 2017: A world survey of sexual orientation laws: criminalisation, protection and recognition*. International Lesbian Gay Bisexual Trans and Intersex Association. Retrieved from http://ilga.org/downloads/2017/ILGA_State_Sponsored_Homophobia_2017_WEB.pdf.
- Costa, P. A., Caldeira, S., Fernandes, I., Rita, C., Pereira, H., & Leal, I. (2013). Atitudes da população portuguesa em relação à homoparentalidade. *Psicologia: Reflexão e Crítica*, *26*(4), 790–798. <https://doi.org/10.1590/s0102-79722013000400020>.
- Costa, P. A., Pereira, H., & Leal, I. (2015). “The contact hypothesis” and attitudes toward same-sex parenting. *Sexuality Research & Social Policy*, *12*(2), 125–136. <https://doi.org/10.1007/s13178-014-0171-8>.
- D'Amore, S., & Green, R. J. (2012). *The D'Amore and green same-sex parenting scale*. Belgium: University of Liège.
- Duncan, M. L., & Kimmelmeier, M. (2012). Attitudes toward same-sex marriage: An essentialist approach. *Analyses of Social Issues & Public Policy*, *12*(1), 377–399. <https://doi.org/10.1111/j.1530-2415.2012.01290.x>.
- Fraser, I. H., Fish, T. A., & McKenzie, T. M. (1995). Reactions to child custody decisions involving homosexual and heterosexual parents. *Canadian Journal of Behavioural Science*, *27*(1), 52–63. <https://doi.org/10.1037/0008-400X.27.1.52>.
- Frias-Navarro, D., & Monterde-i-Bort, H. (2012). A scale on beliefs about children's adjustment in same-sex families: Reliability and validity. *Journal of Homosexuality*, *59*, 1273–1288. <https://doi.org/10.1080/00918369.2012.720505>.
- Frias-Navarro, D., Monterde-i-Bort, H., Pascual-Soler, M., & Badenes-Ribera, L. (2015). Etiology of homosexuality and attitudes toward same-sex parenting: A randomized study. *Journal of Sex Research*, *52*(2), 151–161. <https://doi.org/10.1080/00224499.2013.802757>.
- Giammattei, S. V., & Green, R.-J. (2012). LGBTQ couple and family therapy: History and future directions. In J. J. Bigner & J. L. Wetchler (Eds.), *Handbook of LGBT-affirmative couple and family therapy* (pp. 1–22). New York: Routledge.
- Haslam, N., & Levy, S. R. (2006). Essentialist beliefs about homosexuality: Structure and implications for prejudice. *Personality and Social Psychology Bulletin*, *32*(4), 471–485. <https://doi.org/10.1177/0146167205276516>.
- Hatzenbuehler, M. L., McLaughlin, K. A., Keyes, K. M., & Hasin, D. S. (2010). The impact of institutional discrimination on psychiatric disorders in lesbian, gay, and bisexual populations: A prospective study. *American Journal of Public Health*, *100*(3), 452–459. <https://doi.org/10.2105/AJPH.2009.168815>.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: The Guilford Press.
- Hayes, A. F. (2015). An index and test of linear moderated mediation. *Multivariate Behavioral Research*, *50*(1), 1–22. <https://doi.org/10.1080/00273171.2014.962683>.
- Hegarty, P. (2002). ‘It's not a choice, it's the way we're built’: Symbolic beliefs about sexual orientation in the US and Britain. *Journal of Community and Applied Social Psychology*, *12*(3), 153–166. <https://doi.org/10.1002/casp.669>.
- Herek, G. M. (1998). The attitudes toward lesbians and gay men (ATLG) scale. In C. M. Davis, W. H. Yarber, R. Bauserman, G. Schreer, & S. L. Davis (Eds.), *Sexuality-related measures: A compendium* (pp. 392–394). Thousand Oaks: Sage Publications.
- Herek, G. M. (2009a). Sexual prejudice. In T. D. Nelson (Ed.), *Handbook of prejudice, stereotyping, and discrimination* (pp. 441–467). New York: Psychology Press.
- Herek, G. M. (2009b). Sexual stigma and sexual prejudice in the United States: A conceptual framework. In D. Hope (Ed.), *Contemporary perspectives on lesbian, gay, and bisexual identities* (Vol. 54, pp. 65–111). New York: Springer.
- Herek, G. M., & Capitano, J. P. (1996). “Some of my best friends”: Intergroup contact, concealable stigma, and heterosexuals' attitudes toward gay men and lesbians. *Personality and Social Psychology Bulletin*, *22*(4), 412–424. <https://doi.org/10.1177/0146167296224007>.
- Herek, G. M., & Capitano, J. P. (1999). Sex differences in how heterosexuals think about lesbians and gay men: Evidence from survey context effects. *Journal of Sex Research*, *36*(4), 348–360. <https://doi.org/10.1080/00224499909552007>.
- Hollekim, R., Slaatten, H., & Anderssen, N. (2012). A nationwide study of Norwegian beliefs about same-sex marriage and lesbian and gay parenthood. *Sexuality Research & Social Policy: A Journal of the NSRC*, *9*, 15–30. <https://doi.org/10.1007/s13178-011-0049-y>.
- Hooghe, M., & Meeusen, C. (2013). Is same-sex marriage legislation related to attitudes toward homosexuality? *Sexuality Research & Social Policy: Journal of NSRC*, *10*(4), 258–268. <https://doi.org/10.1007/s13178-013-0125-6>.
- Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology*, *60*(1), 307–337. <https://doi.org/10.1146/annurev.psych.60.110707.163600>.
- Katzuny, K., & Green, R.-J. (2014). *Support for same-sex marriage scale*. San Francisco: California School of Professional Psychology, Alliant University.

- Kite, M. E., & Deaux, K. (1987). Gender belief systems: Homosexuality and the implicit inversion theory. *Psychology of Women Quarterly*, *11*(1), 83–96. <https://doi.org/10.1111/j.1471-6402.1987.tb00776.x>.
- Lax, J. R., & Phillips, J. H. (2009). Gay rights in the states: Public opinion and policy responsiveness. *American Political Science Review*, *103*(3), 367–386. <https://doi.org/10.1017/S0003055409990050>.
- Le Monde. (2013, February 7). *Décryptages débats [Decrypting debates]*, pp. 22–23.
- Le Refuge. (2014). *Les appels à l'aide des jeunes homosexuels en rupture familiale augmentent (encore) [The calls for help from the young gay people experiencing a family breakdown (still) increase]*. Retrieved from <http://www.le-refuge.org/actualites-presses/item/les-appels-a-l-aide-des-jeunes-homosexuels-en-rupture-familiale-augmentent-encore-2.html>.
- Lee, T.-T., & Hicks, G. (2013). An analysis of factors affecting attitudes toward same-sex marriage: Do the media matter? *Journal of Homosexuality*, *58*(10), 1391–1408. <https://doi.org/10.1080/00918369.2011.614906>.
- Lewis, G. B. (2011). The friends and family plan: Contact with gays and support for gay rights. *Policy Studies Journal*, *39*(2), 217–238. <https://doi.org/10.1111/j.1541-0072.2011.00405.x>.
- Mallaval, C. & Luysen, J. (2016, February 16). Laurence Rossignol: «Tout le monde puise dans la culpabilité des femmes» [Laurence Rossignol: Everybody draws on women's guilt]. *Libération*. Retrieved from http://www.liberation.fr/france/2016/02/16/laurence-rossignol-tout-le-monde-puise-dans-la-culpabilite-des-femmes_1433842.
- Massey, S. G. (2007). Sexism, heterosexism, and attributions about undesirable behavior in children of gay, lesbian, and heterosexual parents. *Journal of GLBT Family Studies*, *3*(4), 457–483. https://doi.org/10.1300/J461v03n04_05.
- Massey, S. G., Merriwether, A. M., & Garcia, J. R. (2013). Modern prejudice and same-sex parenting: Shifting judgments in positive and negative parenting situations. *Journal of GLBT Family Studies*, *9*(2), 129–151. <https://doi.org/10.1080/1550428X.2013.765257>.
- McCreary, D. R. (1994). The male role and avoiding femininity. *Sex Roles*, *31*, 527–531.
- McCutcheon, J., & Morrison, M. A. (2015). The effect of parental gender roles on students' attitudes toward lesbian, gay, and heterosexual adoptive couples. *Adoption Quarterly*, *18*(2), 138–167. <https://doi.org/10.1080/10926755.2014.945702>.
- McLeod, A. C., Crawford, I., & Zeichmeister, J. (1999). Heterosexual undergraduates' attitudes toward gay fathers and their children. *Journal of Psychology and Human Sexuality*, *11*(1), 43–62. https://doi.org/10.1300/J056v11n01_03.
- Merino, S. M. (2013). Contact with gays and lesbians and same-sex marriage support: The moderating role of social context. *Social Science Research*, *42*(4), 1156–1166. <https://doi.org/10.1016/j.ssresearch.2013.02.004>.
- Morse, C. N., McLaren, S., & McLachlan, A. J. (2007). The attitudes of Australian heterosexuals toward same-sex parents. *Journal of GLBT Family Studies*, *3*(4), 425–455. https://doi.org/10.1300/J461v03n04_04.
- Moskowitz, D. A., Rieger, G., & Roloff, M. E. (2010). Heterosexual attitudes toward same-sex marriage. *Journal of Homosexuality*, *57*(2), 325–336. <https://doi.org/10.1080/00918360903489176>.
- Munoz Boudet, A. M., Petesch, P., Turk, C., & Thumala, M. A. (2012). *On norms and agency : Conversations about gender equality with women and men in 20 countries*. Washington D.C.: The Worldbank Retrieved from <http://documents.worldbank.org/curated/en/234151468324057689/On-norms-and-agency-conversations-about-gender-equality-with-women-and-men-in-20-countries>.
- Olson, L. R., Cadge, W., & Harrison, J. T. (2006). Religion and [US] public opinion about same-sex marriage. *Social Science Quarterly*, *87*(2), 340–360. <https://doi.org/10.1111/j.1540-6237.2006.00384.x>.
- Ortelli, F. (2012, December 12). Polygamie, pédophilie, terrorisme, inceste... à quoi mène le mariage pour tous [Polygamy, pedophilia, terrorism, incest ... what leads same-sex marriage] ? *Slate.fr*. Retrieved from <http://www.slate.fr/story/65619/mariage-pour-tous-7-cliches-capitiaux>.
- Perrin, E. C. (2002). *Sexual orientation in child and adolescent health care*. New York: Kluwer Academic.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, *90*, 751–783. <https://doi.org/10.1037/0022-3514.90.5.751>.
- Rostosky, S. S., Riggle, E. D. B., Horne, S. G., & Miller, A. D. (2009). Marriage amendments and psychological distress in lesbian, gay and bisexual (LGB) adults. *Journal of Counseling Psychology*, *56*, 56–66. <https://doi.org/10.1037/a0013609>.
- Schiappa, E., Gregg, P. B., & Hewes, D. E. (2005). The parasocial contact hypothesis. *Communication Monographs*, *72*(1), 92–115. <https://doi.org/10.1080/0363775052000342544>.
- Schiappa, E., Gregg, P. B., & Hewes, D. E. (2006). Can one TV show make a difference? Will & grace and the parasocial contact hypothesis. *Journal of Homosexuality*, *51*(4), 15–37. https://doi.org/10.1300/J082v51n04_02.
- Sigillo, A. E., Miller, M. K., & Weiser, D. A. (2012). Attitudes toward nontraditional women using IVF: The importance of political affiliation and religious characteristics. *Psychology of Religion and Spirituality*, *4*(4), 249–263. <https://doi.org/10.1037/a0027940>.
- Smith, S. J., Axelton, A. M., & Saucier, D. A. (2009). The effects of contact on sexual prejudice: A meta-analysis. *Sex Roles*, *61*(3/4), 178–191. <https://doi.org/10.1007/s11199-009-9627-3>.
- Smith, S. J., Zanotti, D. C., Axelton, A. M., & Saucier, D. A. (2011). Individuals' beliefs about the etiology of same-sex sexual orientation. *Journal of Homosexuality*, *58*(8), 1110–1131. <https://doi.org/10.1080/00918369.2011.598417>.
- SOS Homophobie. (2014). *Rapport sur l'homophobie [Report on homophobia]*. Retrieved from http://www.sos-homophobie.org/sites/default/files/rapport_annuel_2014.pdf.
- Stambolis-Ruhstorfer, M., & Tricou, J. (2017). Resisting “gender theory” in France: A fulcrum for religious action in a secular society. In R. Kuhar & D. Paternotte (Eds.), *Anti-gender campaigns in Europe* (pp. 79–98). London: Rowman & Littlefield.
- Todd, N. R., & Ong, K. S. (2012). Political and theological orientation as moderators for the association between religious attendance and attitudes toward gay marriage for white Christians. *Psychology of Religion and Spirituality*, *4*(1), 56–70. <https://doi.org/10.1037/a0025142>.
- Webb, S. N., Chonody, J. M., & Kavanagh, P. S. (2017). Attitudes toward same-sex parenting: An effect of gender. *Journal of Homosexuality*, *64*(11), 1583–1595. <https://doi.org/10.1080/00918369.2016.1247540>.
- Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology*, *71*(1), 3–25. <https://doi.org/10.1037/0022-0663.71.1.3>.
- Whitley, B., & Kite, M. (2009). *The psychology of prejudice and discrimination*. Boston: Cengage Learning.
- Whitley Jr., B. E. (1990). The relationship of heterosexuals' attributions for the causes of homosexuality to attitudes toward lesbians and gay men. *Personality and Social Psychology Bulletin*, *16*(2), 369–377. <https://doi.org/10.1177/0146167290162016>.
- Wight, R. G., LeBlanc, A. J., & Badgett, M. V. L. (2013). Same-sex legal marriage and psychological well-being: Findings from the California health interview survey. *American Journal of Public Health*, *103*(2), 339–346. <https://doi.org/10.2105/ajph.2012.301113>.