The Role of Sexual Prejudice and Aetiology Beliefs on the Italians' Attitudes towards Adoption by Same-Sex Couples

(PREPRINT VERSION; this paper is under review and it is not have been peer reviewed yet)

Authors: Silvia Di Battista, Daniele Paolini, Monica Pivetti, and Lucia Mongelli

Silvia Di Battista: Corresponding author: University of Chieti-Pescara, Department of Psychological, Territorial, and Health Science, via dei Vestini, 31, 66100, Chieti (Italy). E-mail: s.dibattista@unich.it; ORCID: 0000-0002-6606-9903

Daniele Paolini: University of Roma Tre, Department of Education Science, Via del Castro Pretorio, 20, 00185 Rome, (Italy). ORCID: 0000-0002-9479-4360

Monica Pivetti: University of Bergamo, Department of Human and Social Science, Piazzale Sant'Agostino 2, Bergamo (Italy). ORCID 0000-0002-8378-2911

Lucia Mongelli: University of Chieti-Pescara, Department of Psychological, Territorial, and Health Science, via dei Vestini, 31, 66100, Chieti (Italy).

Abstract

Research found that those who believe sexual orientation is inborn have generally positive attitudes towards gay men and lesbians. However, other studies have also found that these beliefs could include negative eugenic ideas. This study aims to investigate the role of people's beliefs about the aetiology of sexual orientation on attitudes towards adoption for both gay and lesbian couples. We hypothesized that this relationship would be mediated by sexual prejudice. To test the predictions, 256 Italian heterosexual participants were asked to answer to a scale about their beliefs regarding the aetiology of sexual orientation, sexual prejudice, and attitudes towards adoption by same-sex couples. Results confirmed that the relationship between aetiology beliefs and adoption support was fully mediated by

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

sexual prejudice. These investigation results suggest that the belief that sexual orientation is controllable may serve to justify one's prejudice and, in turn, result in a lower support for same-sex couples' adoption.

Key-words: beliefs about the aetiology of sexual orientation; sexual prejudice; same-sex couples; same-sex parenting; gay fathers; lesbian mothers

Introduction

Opinions of Italian people towards adoption for same-sex couples have rapidly become more positive in recent years. Eurispes (the Italian Institute for Political, Economic, and Social Studies) surveys showed that in 2015 only 27.8% of Italians declared themselves to be in favour of adoption for same-sex couples, while in 2020 this percentage rose to 42% (Eurispes Report, 2020). In 2016, the Italian Parliament recognized the civil partnerships for same-sex couples. However, reproductive rights for same-sex partners and parenting were excluded. Currently, the medically assisted reproduction for same-sex couples (e.g., use of donated gametes and embryos, surrogate motherhood) is banned (Law 40/2004). Furthermore, the process of recording children born abroad from surrogacy or donor insemination in the national registry of births is complex for Italian same-sex couples. For instance, in April 2020, the Italian Supreme Court (the highest court in Italy) denied a couple of lesbians the possibility of recognizing jointly a child who was born in Italy but conceived abroad through the use of medically assisted procreation (resolutions no. 7668/2020). According to the adoption path, in a limited number of situations, step-child adoption and foster care can be done by an Italian Court order regulated by the law n° 184/1983 (the so-called "adoptions in particular cases"). However, adoption is in principle permitted only to married couples who must be of different-sex by the law n° 149/2001. This situation persists although research showed that no differences were found for children raised by same-sex parents as compared with those raised by different-sex parents (e.g., Carone, Lingiardi,

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Chirumbolo & Baiocco, 2018; Fedewa, Black & Ahn 2015; Patterson, 2017). Research has revealed that negative attitudes toward same-sex parenting are widespread (e.g., Hosking & Ripper, 2012; Pistella et al., 2017; Webb & Chonody, 2012). Italian people still show a preference for the adoption for different-sex parents than for both lesbian and gay couples (e.g., Di Battista, Pivetti, Paolini & Poliandri, 2020). The most common arguments against same-sex parents are either based on judgments of inability to be parents or on the negative effects that these parents have on child development (Clarke, 2001; Authors, under review). People who hold more negative attitudes toward same-sex parenting are more likely to be heterosexual men than heterosexual women (e.g., Costa et al., 2018; Rye et al., 2010; Smith et al., 2011) and to be more religious (e.g., Crawford et al 1999; Costa et al., 2018). Heterosexual men endorse higher levels of sexual prejudice than heterosexual women in many countries and cultures (Ciocca et al., 2016; Furnham & Saito, 2009; Harbaugh & Lindsey, 2015; Herek, 2002; Parrott et al., 2002) including Italy (Ciocca et al., 2016; Lingiardi et al., 2015). Furthermore, sexual stigma is often conveyed and reinforced by heterosexist beliefs and practices propagated by different societal institutions such as the Church (Costa et al., 2018). In Italy, the doctrinaire positions of the Catholic Church, the most influential religious institution in Italy, still describe the same-sex couples' behaviours as "objectively disorderly" (e.g., Catechism of the Catholic Church 1993, pp. 2357–2358) reinforcing, in this way, the marginalization of same-sex parent families. Another key factor in predicting negative attitudes toward same-sex parenting is what people think about the controllability of sexual orientation and the developmental origins of non-heterosexual behaviors (e.g., Costa et al., 2018; Crawford et al., 1999; Friass Navarro et al., 2013; Rye et al., 2010; Smith et al., 2011). Indeed, perceiving controllability for non-heterosexual behaviors suggests a level of choice which is sometimes accompanied by negative evaluations for same-sex parent families (e.g., Costa et al., 2018; Crawford et al., 1999).

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

In this study, we argue that belief that sexual orientation is controllable may serve to justify one's negative attitudes in those with high levels of sexual prejudice and subsequently result in the opposition to adoption by same-sex couples. In Italy, these negative beliefs would be institutionally reinforced by religious discourses and would be more likely to remain undisputed among heterosexual men (e.g., Ciocca et al., 2016; Lingiardi et al., 2015; Scandurra et al, 2017).

The beliefs on the etiology of sexual orientation

Sexual orientation can be seen as either controllable, thus changeable (i.e. influenced by social and environmental factors, or by individual choice), or not controllable and thus unchangeable (i.e. influenced by biological or genetic factors). In literature, perceiving controllability for sexual orientation is associated to negative evaluations of same-sex behaviours and relationships (Costa et al., 2018; Whitley, 1990). Haslam and Levy (2006) argued that the belief that same-sex sexual orientation is biologically based, immutable, and fixed early in life is one dimension of the essentialist beliefs. In general, essentialist beliefs are a set of ontological assumptions that have important implications for attitudes and they involve an inappropriate understanding of social categories as "natural kinds". Following Rothbart and Taylor's study (1992), Haslam and Levy (2006) argued that essentialist beliefs are a fundamental component of prejudice, because they tend to accentuate group differences. For instance, studies found that the belief in the biological basis of gender and race is associated with greater endorsement of gender and racial stereotypes (Martin & Parker, 1995). Leyens and colleagues (2000) also proposed that essentialized outgroups are often "infra-humanized," in order to legitimate and naturalize unequal social arrangements. However, Haslam and Levy (2006) showed that some essentialist beliefs applied to sexual orientation, particularly the belief that same-sex sexual orientation is biologically based and immutable were not associated with negative attitudes but with positive ones. In their investigations, participants who expressed stronger antigay attitudes saw being gay or lesbian

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

as more changeable and culturally specific, rather than being biologically based. Research consistently found that those who believe sexual orientation is inborn or based on biological factors (such as genetics) and that it is not a personal choice, are more likely to have positive attitudes toward gay men and lesbian women (Haslam, Rothschild & Ernst, 2002; Hegarty, 2002; Hegarty & Pratto, 2001; Smith, Zanotti, Axelton & Saucier, 2011). On the contrary, heterosexual people who perceive same-sex behaviour as a choice or a controllable state were found to hold higher levels of sexual prejudice (e.g., Costa, Pereira & Leila, 2018; Hans, Kersey, & Kimberly, 2012). For instance, Whitley (1990) examined how college students' perceptions of the controllability of being gay or lesbian influence their perceptions of gay men and lesbian women. Results of this study showed that heterosexual individuals' attitudes were more negative when same-sex sexual orientation was attributed to controllable than to uncontrollable causes. However, the authors cannot confirm the prediction that people expressing more favourable attitudes towards lesbians and gay people attribute same-sex sexual orientation to less controllable causes. Investigating predictors of sexual prejudice regarding lesbian and gay parenting among a sample of Portuguese heterosexual people, Costa, Pereira and Leila (2018) revealed that being older, male, and more religious, as well as having a lower education level, were associated with stronger beliefs of same-sex sexual orientation as being controllable, and these beliefs were in turn associated with more negative attitudes towards same-sex parenting. Exploring Portuguese university students' attitudes toward same-sex parenting and towards gay and lesbian rights, Costa and colleagues (2014) also revealed that men were significantly more likely than women to believe that "Homosexuality is a choice", that "Parents play an important role in the development of their children's sexual orientation", that "Homosexuality is learned in contact with homosexual people", that "Homosexuality is a mental illness", and to disagree that "Homosexuality is as natural as heterosexuality" (p. 1677). Gender differences were also found in relation to gay and lesbian civil rights: Men were more likely than women to be uncomfortable with same-sex marriage and to disagree

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

with gay and lesbian people fighting for their rights and in particular the right to have children. Authors also found that beliefs about the social and environmental basis of same-sex sexual orientation were weakly correlated with negative attitudes towards same-sex parenting and toward gay and lesbian civil rights, while the belief that same-sex sexual orientation is a mental illness was highly correlated with these attitudes. These authors concluded that the beliefs about the aetiology of same-sex sexual orientation "may not be direct predictors of attitudes toward gay and lesbian rights, but more closely linked to negative affective reactions toward lesbian and gay men, i.e., homophobia" (p. 1681). In a sample of Spanish university students, Frias-Navarro and colleagues (2013) found that when participants attributed a non-controllable origin to the same-sex sexual orientation, they showed greater support for the rights of gay men and lesbians to marry and adopt children, compared to the participants who believed that the origin was environmental. Rye and Meaney (2010) investigated the predictors of Canadian psychology students' attitudes towards same-sex parents' adoption using a quasi-experimental design in which participants read one of three adoption scenarios (i.e., heterosexual couple, gay male couple, or lesbian couple). Results showed that beliefs about the aetiology of same-sex sexual orientation were predictive for both men's and women's attitudes: Participants who more strongly endorsed environmental explanations of same-sex sexual orientation rated same-sex parent adoption candidates more negatively than those who endorsed biological explanations. In general, male participants rated heterosexual couples significantly more favorably than lesbian couples as candidates for adoption who, in turn, were rated significantly more favorably than gay male couples. On the other hand, female participants evaluated lesbian couples less favorably than both heterosexual and gay male couples who were rated as being equally desirable. Investigating the attitudes towards adoption for gay and lesbian couples in a sample of Psychologists across the United States, Crawford and colleagues (1999) found that beliefs about the aetiology of same-sex sexual orientation was the most predictive variable in the custody recommendations for same-sex partners. Participants who believed same-sex

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

sexual orientation is a matter of choice were more likely not to recommend custody for both gay and lesbian couples. Smith and colleagues (2011) explored the relationships between beliefs about the aetiology of same-sex sexual orientation, sexual prejudice, and support for gay-relevant legislation (comprising adoption) among U.S. undergraduate psychology students. Results revealed that the relationship between aetiology beliefs and support for gay-relevant legislation was mediated by sexual prejudice. The authors proposed that it is not the existence of empirical evidence for either side of the nature versus nurture aetiology debate on sexual orientation that affects the negative attitudes toward gay- and lesbian- relevant legislation, but rather how people use their own understanding of the aetiology of sexual orientation. In the same way, Haslam and Levy (2006) also suggested that the associations between the beliefs about the aetiology of sexual orientation and prejudice or discrimination are not straightforward. Other studies have also found that the belief that same-sex sexual orientation is based on biological factors could also increase sexual prejudice and discriminatory policies (Halley, 1994; Haslam, Bastian, & Bisset, 2004), because it can be used to support negative opinions, including those of people who agree with negative eugenic ideas (Sheldon et al., 2007). Furthermore, Haslam and colleagues (2002) found that even if beliefs in the immutability and naturalness of male same-sex sexual orientation were associated with less negative attitudes towards gay men, essentialist beliefs were also associated with the perception of gay men as being a categorically different "species", a belief that may increase intolerance. In Croatia, Huic, Jelic and Kamenov (2017) investigated essentialist beliefs about same-sex sexual orientation as determinants of discriminatory intentions against gay men and lesbian women, and the readiness to engage in positive action toward them. Results showed that essentialist beliefs about homosexuality were strong predictors of both negative and positive behavioral intentions. Beliefs about the immutability of same-sex sexual orientation were associated with fewer intentions to discriminate, and more readiness to engage in positive behavior, while discreteness beliefs (a belief that there are clear and sharp

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

boundaries between sexualities) were inversely related to both. Furthermore, essentialist beliefs impacted attitudes towards lesbian and gay people which were in turn associated with intention to discriminate, and readiness to engage in positive action.

Consistently with the aforementioned literature (Costa et al., 2018; Huic et al., 2017; Smith et al., 2011), we intended to explore Italian cisgender heterosexual beliefs about the aetiology of sexual orientation. Particularly, we examined how the aetiology beliefs would affect sexual prejudice against same-sex parents and people's acceptance of adoption for both gay and lesbian couples. What is missing in the literature is a more solid understanding of the relationship between the beliefs in the aetiology of same-sex sexual orientation and the negative attitudes towards adoption by both gay men and lesbian women couples in Italy. We propose that an increase in personal beliefs that same-sex sexual orientation is controllable would be related to higher levels of sexual prejudice against same-sex parents that, in turn, would impact on negative attitudes towards same-sex parents' adoption. Therefore, we tested the mediational role of the sexual prejudice against same-sex parents on the relationship between Italians' aetiology beliefs and their level of adoption support for both lesbian couples (*Hp1*) and gay couples (*Hp2*). Thus, we explored whether sexual prejudice against same-sex parents mediated the relationship between the aetiology beliefs and the adoption support for lesbian and gay couples and how it did so. As previous research showed that women were more likely to support same-sex parent adoption and reported sexual prejudice less often than men (e.g. Salvati, Paolini, Giacomatonio, & Baiocco, 2019), one could expect that women would be more in favour of same-sex (step)parenting than men. Furthermore, in Italy, religious institutions could tend to reinforce the belief that same-sex orientation is controllable, and even changeable, increasing negative attitudes toward lesbians and gay men and same-sex parenting. For these reason, we controlled for gender and religiosity.

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Methods

Participants and Procedures

This empirical study consisted of a 20-minute self-reported questionnaire implemented online using the Qualtrics.com form and administered throughout Italy. A total of 285 questionnaires were administered online. Since the study aims to investigate Italian heterosexuals' attitudes towards adoption by same-sex couples, non-heterosexual participants were not included in the analyses ($n = 29$). The final sample consisted of 256 self-identified cisgender and heterosexual Italian men ($n = 128$) and women ($n = 128$) aged from 18 to 72 years ($M = 36.48$ years, $SD = 13.09$). The sample was medium-to-highly educated with 46.5% having completed secondary school ($n = 119$), 45.3% having a university degree ($n = 116$), and 8.2% having a post-graduate degree or a PhD qualification ($n = 21$). Participants originated from regions of the Center ($n = 112$; 43.8%), the South ($n = 105$; 41%), and the North ($n = 39$; 15.2%) of Italy. As regards religious belief, 102 participants (39.8%) were not religious at all, 75 were slightly religious people (29.3%), and 79 were medium-to-highly religious people (30.9%). The research complied with the Ethics Code of the Italian Psychology Association (Associazione Italiana di Psicologia - AIP, 2015), and it was conducted in accordance with WMA-Declaration of Helsinki (1964/2013). As no Institutional Review Board for Psychology research was available from the affiliations of the social psychology researchers involved in the study, no request for approval could be submitted.

Measures

Aetiology beliefs. To measure participants' ideas about the origins of sexual orientation, a measure of beliefs about the controllability of sexual orientation was administered (adapted by Costa, Pereira & Leile, 2018; Smith et al., 2011). The instrument measures beliefs about the developmental origins and controllability of same-sex sexual orientation. Six items included the following statements:

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

"*Children raised without clear gender roles are more likely to be gay or lesbian*;" "*Individuals who have more stressors and pressures put on them may become gay or lesbian as a result*;" "*Having a dysfunctional family is a cause of being gay or lesbian*;" "*Being gay or lesbian has biological bases (R)*;" "*People are born gay or lesbian (R)*;" "*Being gay or lesbian is not a choice (R)*." We assessed each item on a Likert-type scale from 1 (strongly disagree) to 9 (strongly agree). Higher scores on this measure indicates a greater belief that a same-sex sexual orientation is due to a social reaction to one's environment and that being gay or lesbian is controllable ($\alpha = .84$).

Sexual Prejudice against Same-Sex Parents. Five items of the attitudes toward gay and lesbian parenting scale (adapted from Costa et al., 2014) measured participants' beliefs about the negative impact of gay and lesbian parents on child development and whether gay men and lesbian women are unfit parents ("*Gay men and lesbians should not have children because it is a sin;*" "*Gay and lesbian parents do not care about children's best interests;*" "*Children of gay and lesbian parents will become gay or lesbian or will be confused about their sexuality;*" "*Children of gay and lesbian parents do not have the needed masculine and feminine references for their normal development*;" "*It is not natural for gay men and lesbians to have children.*") We assessed each item on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). Higher scores on this measure indicate a greater sexual prejudice ($\alpha = .91$).

Attitudes towards Adoption for Gay and Lesbian Couples. Two independent items of the Attitudes towards Pathways to Parenthood for Same-Sex Couples measure (Ioverno et al., 2017) were used to evaluate attitudes toward the adoption pathway to parenthood for both gay couples and lesbian couples. Participants first read: "*How much are you in favour of these methods for having children used by gay men couples (couples made up of two men) or lesbians (couples made up of two women)?*" They then rated the "*adoption for lesbian couples*" and "*the adoption for gay couples*" on a 7-point scale

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

from 1 (completely contrary) to 5 (completely favourable). Higher scores on this measure indicated positive attitudes towards adoption for both gay and lesbian couples.

Demographic questions. We measured the participants' gender (1 = male; 2 = female), gender identification (1 = I am identified with the assigned biological sex; 2 = I am not identified with the assigned biological sex), age, nationality, self-reported Italian region (1 = Central Italy; 2 = Southern Italy; 3 = Northern Italy), level of education (from 1 = none; up to 7 = post-graduate degree). Participants were also asked about their sexual orientation by answering one item with four alternative responses (1 = heterosexual, 2 = gay men, 3 = lesbian women, 4 = other). We also measured self-report religiousness with a single item (1 = "I am not religious at all"; 2 = "I am slightly religious"; 3 = "I am quite religious; 4 = "I am very religious"; 5 = I am extremely religious").

Results

Table 1 shows the means and standard deviations among all variables and the correlations between all measures investigated in the study. The analyses indicated that these measures were related. Significant positive correlations were found between the controllability of same-sex sexual orientation and sexual prejudice against same-sex parents, whereas negative correlations were found between the controllability of same-sex sexual orientation and the support for both gay and lesbian couples' adoption. These findings suggested that greater degrees of belief that being lesbian or gay is due to social factors were associated with less adoption support for same-sex couples. Furthermore, religiosity is found to be positively related with both sexual prejudice and controllability of same-sex sexual orientation but negatively related with the adoption support.

-------------- Insert Table 1 -------------------

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Mediation Analyses. In order to test our mediational hypotheses, we performed mediation analyses by using the SPSS macro developed by Hayes and Preacher (2014). According to the literature and the rationale described above, we tested two different mediation models (PROCESS model number 4) in which aetiology beliefs were modelled as an independent variable, the sexual prejudice against same-sex parents as mediator, and the adoption support for lesbian couples and for gay couples as separated dependent variables, by controlling for participants' gender and level of religious belief.

Adoption support for lesbian couples. The model in which the effect of the participants' aetiology beliefs on adoption support for lesbian couples was mediated by the participants' level of sexual prejudice was significant ($R^2 = 0.64$; $F (4, 251) = 112.06$, $p < 0.001$; see Figure 1 and Table 2). Participants' gender did not emerge as a significant covariate in the model ($b = -.12$; 95% CI: LLCI = -0.2469; ULCI = 0.4938), while the religious belief was significant ($b = -.27$; 95% CI: LLCI = -0.4630; ULCI = -0.0910). The bootstrap analysis with 5,000 resampling showed that indirect effects via the sexual prejudice ($b = -0.47$; 95% CI: LLCI = -06006; ULCI = -0.3421) were significant, while the direct effect considering the mediator was not significant ($b = -0.001$; 95% CI: LLCI = -0.1180; ULCI = 0.1155). The Sobel test was significant confirming the mediation role of sexual prejudice in this model ($z = 7.86$; $SE = .06$; $p < .001$).

-------------Insert Figure 1 and Table 2 -----------------

Adoption support for gay couple. The model in which the effect of the participants' aetiology beliefs on adoption support for gay couples was mediated by the participants' level of sexual prejudice was significant ($R^2 = 064$; $F (4, 251) = 113.78$, $p < 0.001$; see Figure 2 and Table 3). Participants' gender did not emerge as a significant covariate in the model ($b = 0.25$; 95% CI: LLCI =-0.1189; ULCI = 0.6283), while the religious belief was significant ($b = -0.23$; 95% CI: LLCI = -0.1189; ULCI = 06283). The bootstrap analysis with 5,000 resampling showed that indirect effects via the sexual

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

prejudice (b = -0.48; 95% CI: LLCI = -0.6123; ULCI = -0.3530) were significant, while the direct

effect considering the mediator was not significant (b = 0.01; 95% CI: LLCI = -0.042; ULCI = 01314).

The Sobel test was significant confirming the mediation role of sexual prejudice in this model (z =

7.89; SE = .06; p < .001).

--------------Insert Figure 2 and Table 3--------------

Discussion

These results revealed that cisgender heterosexual Italian participants' greater beliefs that same-

sex sexual orientation is controllable (due a reaction to one's social environment) were associated with

higher levels of sexual prejudice towards same-sex parenting and less support for adoption for both 1)

lesbian and 2) gay parents. Furthermore, the results also revealed that the relationship between

aetiology beliefs and adoption support for both gay and lesbian couples was fully mediated by sexual

prejudice towards same-sex parenting. Specifically, two mediational models revealed that 1) the

relationship between the participants' increased level of belief that same-sex sexual orientation is

controllable and their lower level of adoption support for lesbian couples was mediated by the increase

in sexual prejudice; and 2) the increase in sexual prejudice against same-sex parents mediated the

relationship between the participants' increased level of belief that same-sex sexual orientation is

controllable and their lower level of adoption support for gay couples. The results suggest that belief

that sexual orientation is controllable may contribute to one's prejudice and this prejudice could, in

turn, serve to justify the opposition to adoption by same-sex couples. Furthermore, we controlled for

gender and religious belief which are important predictors of the attitudes towards same-sex parenting

in many studies (e.g., Ciocca et al., 2016; Lingiardi et al., 2015). By controlling for the sex of

participants - which had no effects in the model - we can assert that this measure was not producing the

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

expected relationships. Sex was less important than sexual prejudice against same-sex parents in predicting the attitude towards same-sex couples. However, religiosity did play a role in our model.

The present study expands the line of research into beliefs about the aetiology of sexual orientation and sexual prejudice by including participants from the South, Centre and North of Italy. Results shed more light on the antecedents of support for gay/lesbian adoption and clarified the role of sexual prejudice in modulating the role of beliefs in inborn sexual orientation on adoption support for gay/lesbian couples. These results are consistent with previous evidence that has shown that the perceptions of the controllability of a same-sex sexual orientation is related to more negative perceptions of gay men and lesbians (Whitley, 1990) and more negative attitudes towards same-sex parenting (Crawford et al., 1999; Frias-Navarro et al., 2013; Rye and Meaney, 2010). Previous studies have also similarly shown that the relationship between aetiology beliefs and support for gay and lesbian people's rights (including support for adoption by homosexuals) was mediated by sexual prejudice toward lesbian and gay people (Huic et al., 2017; Smith et al., 2011). However, this is the first study to examine how etiology beliefs and sexual prejudice against same-sex parenting together are negatively related to support for adoption for both lesbian and gay parents in a sample of cisgender heterosexual Italians.

There is scientific evidence and consensus that same-sex parenting does not negatively impact child development (e.g., Hosking & Ripper, 2012; Pistella et al., 2017; Webb & Chonody, 2012). However, sexual prejudice towards both lesbian and gay parents is still widespread throughout Western society. The lack of a social and legal recognition of same-sex parenting is a threat for the psychosocial well-being of same-sex parents and their children (Costa et al., 2018). We point to the need for social policies to reduce prejudice towards sexual minority groups in Italy and in turn to increase the legal recognition of these families. However, reproductive rights for same-sex partners and parenting are still

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

excluded in Italy. Furthermore, many Italian conservative and religious people still strongly contest

same-sex couples and same-sex parents' rights (e.g., Baiocco, Rosati, Pistella, Salvati, Carone, Ioverno

& Laghi, 2020). The biology vs. choice (or nature vs. culture) debate remains a point of serious

contention within the LGBT+ community for its possible consequences on sexual prejudice and gay

rights (Heagarty, 2002). Within scholarly debates, there are divergent positions on the aetiology of

sexual orientation (De Cecco & Elia, 1993). For instance, social constructionists have argued that

sexual orientations are a socially constituted entity, whereas essentialists have argued that sexual

orientations are natural categories that are grounded in biology. Along these lines, a large recent human

genetics study (Ganna et al., 2019) has shown that genetic variation (i.e., the difference in DNA

sequences between individuals within a population) accounts only for a small fraction of sexual

behavior of gay/lesbian people, leaving room for the many ways in which genetics and the

sociocultural context may interact. However, it is challenging to predict the potential impact which any

present or future genetic discoveries will have on the attitudes towards - and the rights of - LGBT+

individuals. We suggested that people with high levels of sexual prejudice could look for any insight

that would emerge from scientific debates on the aetiology of sexual orientation to support their

discriminatory view. In this line, Haslam, Rothschild and Ernst (2002) argued that both social

constructionist and essentialist positions on the origin of a same-sex sexual orientation can carry risks

for sexual prejudice and discrimination. On the one hand, the constructionist belief that sexual

orientation is socially determined could justify the acceptance that sexual orientation can be modified

ignoring the harm caused by sexual orientation change efforts (APA, 2009). On the other hand,

essentialist beliefs on the origin of same-sex sexual orientation can be also used to promote intolerance

by those with high levels of sexual prejudice. For instance, Haslam and Levy (2006) argued that

biological determinist beliefs represent controversial reasons for challenging antigay attitudes since

they can equally be used to medicalize homosexuality and to promote eugenic ideas. Hegarty (2002)

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

also indicated that the belief in the immutability of sexual orientations does not have a direct impact on tolerance, but it does have one for those people and groups who believe that such an association exists. We argue that it is not the existence of scientific evidence for either side of the nature versus environmental etiology debate that affects discrimination but rather how people perceive or use their own understanding of the etiology of sexual orientation (see also Smith et al., 2011).

In the study, limitations are evident. First, this research is correlational, thus, it is not possible to establish the causality on the relationship between aetiology beliefs and sexual prejudice or support for adoption. However, we assume that aetiology beliefs would precede the other two variables in line with other researches showing a similar pattern of results (e.g., Smith et al., 2011). Furthermore, concerning the sample, other demographic variables such as political orientation and/or race/ethnicity of participants may be measured. In future studies multiple dimensions of aetiology beliefs on sexual orientation could be considered. For instance, Haslam and Levy (2006) suggested two other dimensions of essentialist beliefs. One dimension describes beliefs about the discreteness of homosexual orientation, or in other words a belief that there are clear boundaries between genders. The last dimension is the belief that homosexuality is found in all world cultures and throughout history. The current study would also have benefited from including measures of gender stereotypes (Petruccelli, Baiocco, Ioverno, Pistella, & D'Urso, 2015; Pistella, Tanzilli, Ioverno, Lingiardi & Baiocco, 2017) and moral evaluations (Di Battista, Berti, & Pivetti, 2018; Di Battista, Pivetti, Vainio, & Berti, 2020).

References

American Psychological Association. (APA, 2009). *Report of the Task Force on Appropriate Therapeutic Responses to Sexual Orientation*. Washington, DC: American Psychological Association. Retrieved from http:// www.apa.org/pi/lgbt/resources/therapeutic-response.pdf

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Authors (in press), accepted in 2020 in Journal of GLBT family studies.

Baiocco, R., Carone, N., Ioverno, S., & Lingiardi, V. (2018). Same-Sex and Different-Sex Parent Families in Italy. *Journal of Developmental & Behavioral Pediatrics*, *39*(7), 555-563. Doi: 10.1097/dbp.0000000000000583

Baiocco, R., Rosati, F., Pistella, J. et al. (2020). Attitudes and Beliefs of Italian Educators and Teachers Regarding Children Raised by Same-Sex Parents. *Sexuality Research and Social Policy*, *17*, 229–238. Doi: 10.1007/s13178-019-00386-0

Carone, N., Lingiardi, V., Chirumbolo, A., & Baiocco, R. (2018). Italian gay father families formed by surrogacy: Parenting, stigmatization, and children's psychological adjustment. *Developmental Psychology*, *54*(10), 1904–1916. Doi: 10.1037/dev0000571

Ciocca, G., Tuziak, B., Limoncin, E., Mollaioli, D., Capuano, N., Martini, A., …, & Jannini, E. A. (2016). Psychoticism, Immature Defense Mechanisms and a Fearful Attachment Style are Associated with a Higher Homophobic Attitude. *The Journal of Sexual Medicine*, *12*(9), 1953–1960. Doi: 10.1111/jsm.12975

Clarke, V. (2001). What about the children? arguments against lesbian and gay parenting. *Women's Studies International Forum*, *24*(5), 555–570. Doi: 10.1016/s0277-5395(01)00193-5

Costa, P. A., Almeida, R., Anselmo, C., Ferreira, A., Pereira, H., & Leal, I. (2014). University Students' Attitudes Toward Same-Sex Parenting and Gay and Lesbian Rights in Portugal. *Journal of Homosexuality*, *61*(12), 1667–1686. Doi: 10.1080/00918369.2014.951253

Costa, P. A., Pereira, H., & Leal, I. (2018). Through the Lens of Sexual Stigma: Attitudes Toward Lesbian and Gay Parenting. *Journal of GLBT Family Studies*, 1–18. Doi: 10.1080/1550428x.2017.1413474

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Crawford, I., McLeod, A., Zamboni, B. D., & Jordan, M. B. (1999). Psychologists' attitudes toward gay and lesbian parenting. *Professional Psychology: Research and Practice*, *30*(4), 394–401. Doi: 10.1037/0735-7028.30.4.394

De Cecco, J.P., & Elia, P. (1993). *If You Seduce a Straight Person, Can You Make Them Gay?: Issues in Biological Essentialism Versus Social Constructionism in Gay and Lesbian Identities*. Binghamton, NY: The Haworth Press, Inc.

Di Battista, S., Pivetti, M., & Berti, C. (2018). Moral Foundations, Political Orientations and Religiosity in Italy. *The Open Psychology Journal*, *11*, 46-58. Doi: 10.2174/1874350101811010046

Di Battista, S., Pivetti, M., Paolini, D., & Poliandri, M. (2020). Dehumanization of same-sex parents in Italy: An exploratory study. *Psicologia sociale*, 81-104, Doi: 10.1482/96296

Di Battista, S., Pivetti, M., Vainio, A., & Berti, C. (2020). Omission and compromise: The sacredness of moral foundations in political groups in Italy. *Europe's Journal of Psychology*, *16*(1), 128-147. Doi: 10.5964/ejop.v16i1.1887

Eurispes. (2020). *Temi etici: L'opinione degli italiani*. [Ethical themes: The Italians' opinions]. https://eurispes.eu/wp-content/uploads/2020/07/2020_eurispes_-indagine-temi-etici.pdf

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioural, and biomedical sciences. *Behavior Research Methods*, *39*(2), 175–191. Doi: 10.3758/bf03193146

Fedewa, A. L., Black, W. W., & Ahn, S. (2014). Children and Adolescents with Same-Gender Parents: A Meta-Analytic Approach in Assessing Outcomes. *Journal of GLBT Family Studies*, *11*(1), 1–34. Doi: 10.1080/1550428x.2013.869486

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Frias-Navarro, D., Monterde-i-Bort, H., Pascual-Soler, M., & Badenes-Ribera, L. (2013). Etiology of Homosexuality and Attitudes Toward Same-Sex Parenting: A Randomized Study. *The Journal of Sex Research*, *52*(2), 151–161. Doi: 10.1080/00224499.2013.802757

Furnham, A., & Saito, K. (2009). A Cross-Cultural Study of Attitudes Toward and Beliefs About, Male Homosexuality. *Journal of Homosexuality*, *56*(3), 299–318. Doi: 10.1080/00918360902728525

Ganna, A.,Verweij, K. J. H., Nivard, M., Maier, R., Wedow, R., Busch, A. S., …, & Zietsch, B. (2019). Large-scale GWAS reveals insights into the genetic architecture of same-sex sexual behaviour. *Science*, 365(6456). Doi: 10.1126/science.aat7693

Halley, J. E. (1994). Sexual Orientation and the Politics of Biology: A Critique of the Argument from Immutability. *Stanford Law Review*, *46*(3), 503-568. Doi: 10.2307/1229101

Hans, J. D., Kersey, M., & Kimberly, C. (2012). Self-Perceived Origins of Attitudes Toward Homosexuality. *Journal of Homosexuality*, *59*(1), 4–17. Doi: 10.1080/00918369.2012.638547

Harbaugh, E., & Lindsey, E. W. (2015). Attitudes Toward Homosexuality Among Young Adults: Connections to Gender Role Identity, Gender-Typed Activities, and Religiosity. *Journal of Homosexuality*, *62*(8), 1098–1125. Doi: 10.1080/00918369.2015.1021635

Haslam, N., Bastian, B., & Bissett, M. (2004). Essentialist Beliefs about Personality and Their Implications. *Personality and Social Psychology Bulletin*, *30*(12), 1661–1673. Doi: 10.1177/0146167204271182

Haslam, N., & Levy, S. R. (2006). Essentialist Beliefs About Homosexuality: Structure and Implications for Prejudice. *Personality and Social Psychology Bulletin*, *32*(4), 471–485. Doi: 10.1177/0146167205276516

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Haslam, N., Rothschild, L., & Ernst, D. (2002). Are essentialist beliefs associated with prejudice? *British Journal of Social Psychology*, *41*(1), 87–100. Doi: 10.1348/014466602165072

Hayes, A. F., & Preacher, K. J. (2013). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology*, *67*(3), 451–470. Doi: 10.1111/bmsp.12028

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 & Applied Social Psychology*, *12*(3), 153–166. Doi: 10.1002/casp.669

Hegarty, P., & Pratto, F. (2001). Sexual Orientation Beliefs. *Journal of Homosexuality*, *41*(1), 121–135. Doi: 10.1300/j082v41n01_04

Herek, G. M. (2002). Gender Gaps in Public Opinion about Lesbians and Gay Men. *Public Opinion Quarterly*, *66*(1), 40–66. Doi: 10.1086/338409

Hosking, G., & Ripper, M. (2012). In the best interests of the (silenced) child. *Australian Feminist Studies*, *27*(72), 171–188. Doi: 10.1080/08164649.2012.648261

Huic, A., Jelic, M., & Kamenov, Z. (2017). Essentialist Beliefs About Homosexuality Predict Positive and Negative Behavioral Intentions Toward Lesbian Women and Gay Men. *Journal of Homosexuality*, *65*(12), 1631–1655. Doi: 10.1080/00918369.2017.1383104

Ioverno, S., Carone, N., Lingiardi, V., Nardelli, N., Pagone, P., Pistella, J., …, & Baiocco, R. (2017). Assessing Prejudice Toward Two-Father Parenting and Two-Mother Parenting: The Beliefs on Same-Sex Parenting Scale. *The Journal of Sex Research*, *55*(4-5), 654–665. Doi: 10.1080/00224499.2017.1348460

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Italian Psychological Association [Associazione Italiana di Psicologia]. (A.I.P., 2005). *Code of ethics of the Italian Psychological Association*. Retrieved from http://www.aipass.org/node/26

Leyens, J.-P., Paladino, P. M., Rodriguez-Torres, R., Vaes, J., Demoulin, S., Rodriguez-Perez, A., & Gaunt, R. (2000). The Emotional Side of Prejudice: The Attribution of Secondary Emotions to Ingroups and Outgroups. *Personality and Social Psychology Review*, *4*(2), 186–197. Doi: 10.1207/s15327957pspr0402_06

Lingiardi, V., Nardelli, N., Ioverno, S., Falanga, S., Di Chiacchio, C., Tanzilli, A., & Baiocco, R. (2015). Homonegativity in Italy: Cultural Issues, Personality Characteristics, and Demographic Correlates with Negative Attitudes Toward Lesbians and Gay Men. *Sexuality Research and Social Policy*, *13*(2), 95–108. Doi: 10.1007/s13178-015-0197-6

Martin, C. L., & Parker, S. (1995). Folk Theories about Sex and Race Differences. *Personality and Social Psychology Bulletin*, *21*(1), 45–57. Doi: 10.1177/0146167295211006

Matteucci, P. (2016, 30 January). Family day, la piazza avverte Renzi: "No al ddl Cirinnà o ce ne ricorderemo". [Family day, the square warns Renzi: "No to the Cirinnà bill or we will remember"]. L*a Repubblica*. https://www.repubblica.it/politica/2016/01/30/news/family_day-132356069/

Parrott, D. J., Adams, H. E., & Zeichner, A. (2002). Homophobia: personality and attitudinal correlates. *Personality and Individual Differences*, *32*(7), 1269–1278. Doi: 10.1016/s0191-8869(01)00117-9

Patterson, C. J. (2016). Parents' Sexual Orientation and Children's Development. *Child Development Perspectives*, *11*(1), 45–49. Doi: 10.1111/cdep.12207

Pistella, J., Tanzilli, A., Ioverno, S., Lingiardi, V., & Baiocco, R. (2018). Sexism and Attitudes Toward Same-Sex Parenting in a Sample of Heterosexuals and Sexual Minorities: the Mediation Effect of Sexual Stigma. *Sexuality Research and Social Policy*, 15, 139–150. Doi: 10.1007/s13178-017-0284-y

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891. Doi: 10.3758/brm.40.3.879

Rothbart, M., & Taylor, M. (1992). Category labels and social reality: Do we view social categories as natural kinds? In G. R. Semin & K. Fiedler (Eds.), *Language and social cognition* (pp. 11-36). London: Sage Publications

Rye, B. J., & Meaney, G. (2010). Self-Defense, Sexism, and Etiological Beliefs: Predictors of Attitudes toward Gay and Lesbian Adoption. *Journal of GLBT Family Studies*, *6*(1), 1–24. Doi: 10.1080/15504280903472485

Salvati, M., Paolini, D., & Giacomantonio, M. (2019). Vicarious ostracism: behavioral responses of women observing an ostracized gay man. *Rassegna di Psicologia, 36*(2), 53-60.

Scandurra, C., Picariello, S., Valerio, P., & Amodeo, A. L. (2017). Sexism, homophobia and transphobia in a sample of Italian pre-service teachers: the role of socio-demographic features. *Journal of Education for Teaching*, *43*(2), 245–261. Doi: 10.1080/02607476.2017.1286794

Sheldon, J. P., Pfeffer, C. A., Jayaratne, T. E., Feldbaum, M., & Petty, E. M. (2007). Beliefs About the Etiology of Homosexuality and About the Ramifications of Discovering Its Possible Genetic Origin. *Journal of Homosexuality*, *52*(3-4), 111–150. Doi: 10.1300/j082v52n03_06

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. Doi: 10.1080/00918369.2011.598417

Takács, J., Szalma, I., & Bartus, T. (2016). Social Attitudes Toward Adoption by Same-Sex Couples in Europe. *Archives of Sexual Behavior*, *45*(7), 1787–1798. Doi: 10.1007/s10508-016-0691-9

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Webb, S. N., & Chonody, J. (2012). Marriage equality in Australia: the influence of attitudes toward same-sex parenting. *Gay and Lesbian Issues and Psychology Review*, *8*(3), 165–177.

Whitley, 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. Doi: 10.1177/0146167290162016

Declarations

Funding: This study was unfunded.

Conflicts of interest/Competing interests: The authors declare that there are no potential conflicts of interest regarding this paper.

Ethics 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.

Consent to participate: Informed consent was obtained from all individual participants included in the study. Data were fully anonymized, thus making it impossible to identify any persons.

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Table 1. Means (standard deviation) and zero-order correlations among variables (*n* = 256).

Measure	Means (SD)	1	2	3	4	5
1. Aetiology Beliefs	2.82 (1.83)	1				
2.Sexual prejudice	2.29 (1.25)	.56**	1			
3. Adoption support for gay couples	4.75 (2.38)	-.45**	-.79**	1		
4. Adoption support for lesbian couples	4.78 (2.35)	-.45**	-.79**	.97**	1	
5.Religious belief	2 (0.99)	.21**	.26**	-.45**	-.45**	1

Note. **p* < .00

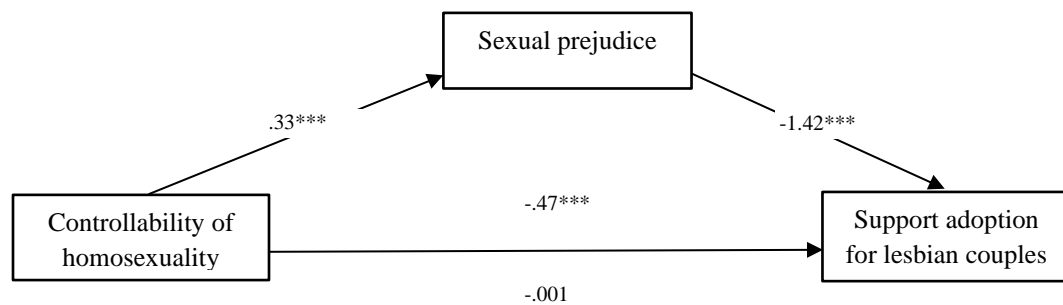
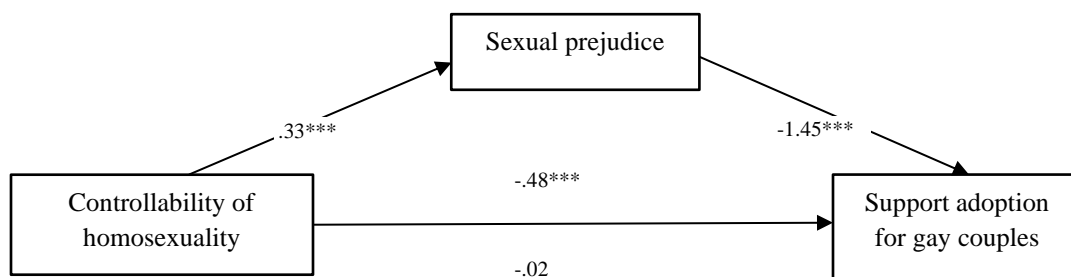
Figure 1. Sexual prejudice mediates the effect of aetiology beliefs on the adoption support for lesbian couple.

****p* < .001.

Figure 2. Sexual prejudice mediates the effect of aetiology beliefs on the adoption support for gay couple.

****p* < .001.

The Role of Aetiology Beliefs on Adoption Support Towards Same-Sex Couples

Table 2. The results of mediation analysis testing for lesbian couples

	Standardized coefficients	*SE*	*t*	*p*-value	LLCI	ULCI
Controllability of homosexuality → **Sexual prejudice**	.48	.03	9.04	< .001	.2586	.4027
Sexual prejudice → Support for **adoption**	-.75	.09	- 15.97	< .001	-1.5918	-1.2423
Controllability of homosexuality → **Support for adoption**	-.36	.07	-6.43	< .001	-.6136	-.3260
Indirect effect	-.36	.06	-	-	-.5986	-.3455

Note: For indirect effects, the values of SE (Standard Error), LLCI (Lower Level of Confidence Interval), ULCI (Upper Level of Confidence Interval) were computed using bootstrapping.

Table 3. The results of mediation analysis testing for gay couples

	Standardized coefficients	*SE*	*t*	*p*-value	LLCI	ULCI
Controllability of homosexuality → **Sexual prejudice**	.48	.04	9.04	< .001	.2586	.4027
Sexual prejudice → Support for **adoption**	-.76	.09	- 16.23	< .001	-1.6287	-1.2762
Controllability of homosexuality → **Support for adoption**	-.37	.07	-6.28	< .001	-.6129	-.3205
Indirect effect	-.37	.05	-	-	-.2559	-.1491

Note: Covariates: Sex of participants: 1 = male; 2 = female; Religiosity. For indirect effects, the values of SE (Standard Error), LLCI (Lower Level of Confidence Interval), ULCI (Upper Level of Confidence Interval) were computed using bootstrapping.