**Italian Validation of the Queer/Liberationist Scale (Short Version) in a Sample of University Students: Confirmatory Factor Analysis**

(Article begins on next page)

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# Italian Validation of the Queer/Liberationist Scale (Short Version) in a Sample of University Students: Confirmatory Factor Analysis

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Abstract  The purpose of the study was to provide evidence on the validity and reliability of the Queer/Liberationist Scale (QLS, short version) among heterosexual Italian university students. The QLS analyzes new manifestations of sexual prejudice. A four-factor structure was supported. The subscales were related to gender, political ideology, religious beliefs, contact, supporting the civil rights of gay people, beliefs about the etiology of homosexuality, and sexual prejudice in the expected direction. Our results may be useful in planning intervention programs designed to foster the tolerance and normality of sexual diversity.

Keywords  Modern sexual prejudice · Measurement · Gay liberation · Queer theory · Reliability · Confirmatory factor analysis · Correlates

## Introduction

The Italian context is characterized by social conservatism and negation of the rights of lesbian, gay, bisexual, and transgender (LGBT) individuals (Salvati et al. 2016; Worthen et al. 2016). The long-standing coexistence of a strong Catholic culture alongside a tolerant Mediterranean one has reinforced the diffusion of a don't ask, don't tell attitude related to same-sex sexual behavior (Lingiardi et al. 2005). The "don't ask, don't tell" approach reinforces a separation between the public and private spheres. Thereby, homosexuality is neither acknowledged nor condemned and it must remain private (Prati et al. 2011). From this standpoint, Italian gay men and lesbians are better tolerated if they do not publicly assert their sexual identity (Lingiardi et al. 2016). This general approach to homosexuality can be seen in schools, families, and social settings (Prati et al. 2011).

Additionally, the interference of the Vatican State in Italian public affairs justifies and reinforces the invisibility of LGBT individuals while indirectly promoting acts of discrimination and violence against them (Worthen et al. 2016). In fact, the recognition of LGBT civil rights may still be a slow process in Italy (Lingiardi et al. 2016). Italy has only recently recognized same-sex civil unions, providing same-sex couples with most of the legal protection enjoyed by married couples (Law 76/2016 of 21 May 2016). The law was signed by the Italian President on 20th May 2016, published in the official gazette on 21st May, and took effect on 5th June 2016. However, the fact that it is still not possible for LGBT individuals who are single or cohabitating to adopt children perpetuates homophobia and marginalization (Baiocco et al. 2013, 2014).

In this context, homosexuality and the public attitude toward it have been marked by marginalization, indifference, and silence. Consequently, there are few studies concerning public attitudes toward gay men and lesbians in Italian samples (e.g., Baiocco et al. 2013; Lingiardi et al. 2005, 2016; Prati et al. 2011).

The concept of sexual prejudice is broad enough to include homophobia, heterocentrism, heterosexism, and any other form of hostility, non-acceptance, or discrimination (Herek and McLemore 2013). Herek (2000) defined sexual prejudice as "all negative attitudes based on sexual orientation, whether the target is homosexual, bisexual, or heterosexual" (p. 19). A heterosexual orientation is considered natural and normal,

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whereas a homosexual orientation continues to be perceived as problematic and unnatural (Herek 2010).

In western societies, since sexual prejudice was proscribed by law (e.g., with the introduction of sexual orientation as one of the explicit constitutional stipulations against discrimination), it has become less socially acceptable to express blatant, overt, or direct sexual prejudice (called traditional sexual prejudice, related to moralistic and religious perceptions of LGBT individuals; Lopes et al. 2016). Nevertheless, instead of disappearing altogether, blatant sexual prejudice has become more subtle and indirect (modern prejudice) and appears in situations where it could be attributed to a non-prejudiced cause (Anderson and Kanner 2011; Lopes et al. 2016; Massey et al. 2013). The fact that hostile forms have been replaced by a more indirect expression of sexual prejudice is attested by numerous authors, such as Frias-Navarro et al. (2016), LaMar and Kite (1998), Massey (2009), Morrison and Morrison (2003, 2011), and Raja and Stokes (1998). For example, Morrison and Morrison (2011), in a nonstudent sample, and Morrison et al. (2009), in an undergraduate student sample, found that the manifestation of sexual prejudice shifted from moral and religious objections to more abstract concerns such as believing that lesbians and gay men were making illegitimate or unnecessary demands for social change. Thus, in today's society, rejection is more subtle than overt.

For this reason, several authors have developed new instruments to assess sexual prejudice in order to adjust to changes in attitudes toward lesbians and gays (LGs; e.g., Cowan et al. 2005; Gato et al. 2012; Massey 2009; Morrison and Morrison 2003). Nevertheless, most of the scales based on sexual prejudice measure only the presence of negative attitudes toward LGs and do not capture positive attitudes such as egalitarianism, progressiveness, open-mindedness, support, or acceptance (e.g., more subtle attitudes toward LGs). An exception is the Polymorphous Prejudice Scale (PPS; Massey 2009), which is characterized by multidimensionality.

The PPS consists of 70 items divided into seven subscales: traditional heterosexism; denial of continued discrimination; aversion toward gay men; aversion toward lesbian women; valuing of gay progress; resistance to heteronormativity; and positive beliefs. These seven factors could be accounted for by two underlying components that measure positive and negative attitudes toward LG individuals separately (Hoffarth 2013). Positive attitudes toward gay men and lesbians are seen to consist of valuing gay progress, resisting heteronormativity, and endorsing positive beliefs, while negative attitudes toward gay people are represented by traditional heterosexism, denial of continued discrimination, aversion toward gay men, and aversion toward lesbians.

Positive attitudes toward gay people are included in the Queer/Liberationist Scale (QLS; Massey 2009), where polymorphous prejudice is a construct that derives its meaning from the notion of queer consciousness. From this perspective,

sexual prejudice is conceptualized through its relations with egalitarian belief systems, heteronormativity, and the perception of progress by sexual minorities (Lopes et al. 2016).

The QLS explores subtle attitudes toward gay people and it goes beyond the traditional terms of heterosexism, heterocentrism, or sexual prejudice (Barrientos et al. 2015; Martinez et al. 2011). As Martinez et al. (2011) point out, Massey used the themes of queer theory and radical feminist literature to elaborate some of the items on the scale (e.g., Hegarty and Massey 2006), alongside items from other scales, such as the Multidimensional Inventory of Black Identity (Sellers et al. 1997), Racial Ambivalence Scales (Katz and Hass 1988), and the Q-sort study of attitudes toward lesbianism (Kitzinger 1987).

The QLS consists of 26 items distributed over three factors: valuing of gay progress (eight items); resistance to heteronormativity (eight items); and positive beliefs (ten items). The valuing of gay progress factor measures the belief that gay people make a unique and valuable contribution to society. The resistance to heteronormativity factor measures personal discomfort toward/resistance to/rejection of ascribed gender roles and expectations. Finally, the positive beliefs factor measures favorable qualities that heterosexual individuals might attribute to gay men and lesbians. Previous studies have found that the QLS subscales maintain a negative relationship with Herek's Attitudes toward Lesbians and Gay Men Scale (ATLG) (Barrientos et al. 2015; Massey 2009). The ATLG measures traditional prejudice, both manifest and explicit.

Barrientos et al. (2015) performed the Spanish language adaptation and validation of a short version of the QLS in a sample of heterosexual Chilean university students. These authors, after their confirmatory factor analysis, concluded that the QLS could be reduced to 16 items, distributed among four factors: valuing of gay and lesbian progress (four items); resistance to heteronormativity (four items); positive beliefs about gay men (four items); and positive beliefs about lesbians (four items). As Barrientos et al. (2015) point out, this short version helps to assess sexual prejudice, with an instrument that saves time and increases the effectiveness of the evaluation process.

The purpose of this study was therefore to adapt and validate the short version of the QLS developed by Barrientos et al. (2015) in the Italian social and cultural context by providing evidence on three different sources of validity: dimensionality of the QLS (via confirmatory factor analysis), reliability, and criterion-related validity.

Concerning this last source of validity, the variables highlighted in the literature as predictors of rejection of people with a homosexual orientation are mainly linked to the following factors: male gender (Barrientos et al. 2015; Cardenas et al. 2012; Costa and Davies 2012; Frias-Navarro et al. 2014; Herek 1988; Lingiardi et al. 2016; Massey 2009; Morrison and Morrison 2003); political conservatism

(Lingiardi et al. 2016; Lopes et al. 2016; Pacilli et al. 2011); religious fundamentalism and religiosity (Barrientos et al. 2013; Jäckle and Wenzelburger 2015; Lingiardi et al. 2016; Lopes et al. 2016; Olson et al. 2006; Schwartz and Lindley 2005); lack of personal contact with gay men and lesbian women (Barth and Parry 2009; Collier et al. 2012; Cooley and Burkholder 2011; Costa et al. 2015; Frias-Navarro et al. 2013; Herek and Capitanio 1996; Lingiardi et al. 2016; Massey 2009); reduced support of the civil rights of gay people (Frias-Navarro and Monterde-i-Bort 2012; Schwartz 2010); and beliefs that sexual orientation is learned rather than genetic or biological explanations about the origin of same-sex sexual orientation, which are linked to a lesser degree of prejudice (Frias-Navarro et al. 2014, 2015; Overby 2014; Smith et al. 2011; Swank and Raiz 2010; Webb and Chonody 2014). We therefore analyzed the relationship between the QLS and participants' gender, religiosity, political ideology, personal contact with gay people, support for the civil rights of gay individuals, and beliefs about the etiology of homosexual sexual orientation. Accordingly, we expect that:

First, men and women's scores will differ in a statistically significant way on the four dimensions of the QLS instrument. Men will show greater rejection of lesbians and gay men.

Second, the more religious participants will show greater rejection of lesbians and gay men compared to non-religious participants.

Third, the participants who are more politically conservative will show greater rejection of lesbians and gay men than those who are non-conservative.

Fourth, the participants who have more personal contact with gay men and lesbians will show lesser rejection toward lesbians and gay men.

Fifth, participants who show higher support for the civil rights of lesbians and gay men will also show lesser rejection toward lesbians and gay men.

Sixth, the scores on beliefs about the learned origin of sexual orientation will correlate negatively with scores on positive attitudes toward lesbians and gay men.

## Method

### Participants

The data were collected from a cross-sectional survey of undergraduate students from Italy. A non-probabilistic (convenience) sample was used. The sample was initially made up of 1045 participants. Of these 1045 individuals, 78 self-identified as non-heterosexual and seven did not answer the question. As the analysis excluded participants that defined themselves as gay, lesbian, or bisexual and those who failed to respond, a total of 85 participants were removed. In addition, the participants that provided incomplete

information were eliminated from the sample ($n = 377$, omitted items and response errors). Finally, the participants aged 30 years or older were eliminated ($n = 38$).

The final sample consisted of 545 heterosexual participants. Of these, 37.5 % were men ($n = 204$), 62.1 % were women ($n = 338$), and 0.4 % self-identified as other ($n = 2$), with ages ranging from 18 to 29 years ($M = 21.34$ years, $SD = 2.12$). The mean age of the men was 21.43 years ($SD = 0.16$) and that of the women was 21.29 years ($SD = 0.11$). One-way analysis of variance (ANOVA) [$F(1, 540) = .06$, $p = .453$], Cohen's $d = 0.07$, and 95 % CI ($-0.11$ to 0.24) demonstrated that there was no significant statistical difference between men and women in terms of age.

### Instruments

The instrument consisted of two sections. The first section included items related to information about socio-demographic variables: gender, age, sexual orientation (self-identification as gay man, lesbian woman, bisexual, or heterosexual), political ideology, and religiosity.

### Political Ideology

The political ideology variable was operationalized with an item in which participants were asked: "Indicate your political ideology by marking a cross on the number where you position yourself." The response scale ranged from 0 for "completely left wing" to 10 for "completely right wing". A higher score on the subscale indicated a greater degree of political conservatism.

### Religiosity

The religiosity variable was operationalized with an item in which participants were asked: "Indicate your religious beliefs by marking a cross on the number where you position yourself." The response scale ranged from 0 for "completely non-religious" to 10 for "completely religious." A higher score on the subscale indicated a greater degree of religiosity.

### Close Personal Contact Variable

The contact variable was operationalized with an item in which participants were asked to respond to the following statement: "In my family or among my closest friends, I have a close relationship with gay men and lesbians." The response scale ranged from 1 for "completely disagree" to 5 for "completely agree." A higher score on the subscale indicated a greater degree of personal contact with lesbians and gay men.

The second section included the QLS short form, ATLG, Beliefs about the Etiology of Sexual Orientation (BESO), and

Opinions about the Non-rights of Individuals with a Homosexual Sexual Orientation (ORHSO).

### Queer/Liberationist Scale—Short Form (Barrientos et al. 2015)

This instrument measures new manifestations of prejudice (e.g., subtle prejudice, or modern prejudice) toward lesbians and gay men. The QLS short form consists of 16 items divided into four subscales: valuing of gay and lesbian progress (four items, e.g., "society is enhanced by the diversity offered for lesbians and gays"); positive beliefs about gay men (four items, e.g., "straight men have a lot to learn from gay men about being friends with women"); resistance to heteronormative expectations (four items, e.g., "I feel restricted by the expectations people have of me because of my gender"); and positive beliefs about lesbians (four items, e.g., "lesbians have a lot to teach other women about being independent"). A Likert-type response scale is used, ranging from 1 "totally in disagreement" to 7 "totally in agreement". Higher scores indicate pro-gay and pro-lesbian attitudes. The valuing of gay and lesbian progress subscale measures an individual's recognition of the accomplishments of the lesbian, gay, bisexual, transgender, and queer movement and the belief that the advancements in civil rights and the diversity brought about by lesbians and gay men have enhanced society. Higher scores reflect a greater commendation of gay progress. The positive beliefs about gay men subscale measures favorable qualities that heterosexual individuals might attribute to gay men. Higher scores indicate greater positive beliefs about gay men. The resistance to heteronormative expectations subscale measures the degree of adherence to conservative standards of sexual morality and traditional gender roles, and the societal expectations that accompany them. Higher scores indicate greater individual resistance to heteronormativity. Finally, the positive beliefs about lesbians subscale measures favorable qualities that heterosexual individuals might attribute to lesbians. The complete scale is displayed in the Appendix to our paper, and its psychometric properties are described in the ʙResults^ section.

### Attitudes Toward Lesbians and Gays Scale (Herek 1988)

The ATLG scale consists of 20 statements, ten concerning gay men (ATG subscale) and ten concerning lesbians (ATL subscale). Respondents mark their level of agreement or disagreement using Likert-type scales ranging from 1 "strongly Disagree" to 6 "strongly agree." High scores (e.g., close to 6) reflect greater prejudice and low scores indicate favorable attitudes toward gay men and lesbians. The total score of each participant on each subscale was calculated as the average of the ten items. The ATLG and the two subscales presented good internal consistency. The alpha coefficients were

$\alpha = 0.91$ (95 % CI = 0.90–0.92) for the ATLG, $\alpha = 0.81$ (95 % CI = 0.80–0.84) for the ATL, and $\alpha = 0.87$ (95 % CI = 0.86–0.89) for the ATG.

### Beliefs about the Etiology of Sexual Orientation (Frias-Navarro 2009a)

The BESO measures individual beliefs about the etiology of a homosexual orientation. The instrument consists of eight items distributed into two subscales: genetic etiology (GE; four items, e.g., "the homosexual sexual orientation is an inevitable behavior that depends on genetics") and learned etiology (LE; four items, e.g., "a child who is raised by same-sex parents will have a greater probability of having a homosexual sexual preference"). The instrument employed a Likert-type response scale, ranging from 1 "completely disagree" to 5 "completely agree." The higher the score, the stronger the belief in the genetic etiology of a homosexual orientation (GE subscale) or the belief in a learned etiology (LE subscale). The total score of each participant on each subscale was calculated as the average of the four items. The internal consistency value was high. Cronbach's alpha for the genetic etiology subscale was $\alpha = 0.85$ (95 % CI = 0.83–0.87) and $\alpha = 0.74$ (95 % CI = 0.71–0.78) for the learned etiology subscale.

### Opinions about the Non-rights of Individuals with a Homosexual Sexual Orientation (Frias-Navarro 2009b)

The instrument measures opinions about the marriage and adoption non-rights of individuals with a homosexual orientation. The scale consists of four items (e.g., "I think it is a social error to legalize marriage between people of the same sex"). A Likert-type response scale was used, ranging from 1 "completely disagree" to 5 "completely agree." The lower the score, the more favorable the opinions concerning LGB marriage and adoption rights. Less favorable opinions are linked to higher scores on the instrument. The total score of each participant was calculated as the average of the four items. Cronbach's alpha was 0.83 (95 % CI = 0.81–0.86).

All the scales were translated into Italian by applying the standard back-translation procedure, which involved translations from English/Spanish to Italian and vice versa (Balluerka et al. 2007).

### Procedure

This study was part of a broader cross-cultural research project on group relations and attitudes toward different social groups. The research was approved by the university's ethical committee. Participants were guaranteed anonymity when filling out the pen-and-paper questionnaires. The questionnaires were completed during class hours, and participation in the study

was voluntary. Furthermore, the participants did not receive course credits for completing the questionnaires. Data were collected between the months of September and November 2015. The whole procedure took approximately 20–40 min.

## Data Analyses

Construct (factorial) validity of the 16-item QLS was assessed via structural equation models using confirmatory factor analysis (CFA). The CFA was estimated using maximum likelihood with Satorra–Bentler robust corrections for the standard errors and fit indices (Babakus et al. 1987; Finney and DiStefano 2006; Hutchinson and Olmos 1998; Kline 2011).

In order to assess model fit, several robust fit criteria were used, as recommended in the literature (Hu and Bentler 1999; Tanaka 1993): (a) $\chi^2$ statistic with the Satorra–Bentler correction (Kline 2011; Ullman 1996); (b) two robust indices that compare with a null mode—the normed fit index (NFI) that assumes a central chi-square distribution and the comparative fit index (CFI) that assumes a non-central chi-square distribution, with cutoff criteria of 0.90 or higher (ideally over 0.95; Hu and Bentler 1999) as indicative of adequate fit; and (c) the root mean square error of approximation (RMSEA; Steiger and Lind 1980), which uses errors of prediction and measurement to assess the degree of match between the hypothesized and true models. A value of the RMSEA of about 0.05 or less indicates a close fit of the model in relation to the degrees of freedom and a value of about 0.08 or less indicates a reasonable error of approximation (Browne and Cudeck 1993; Byrne 2006).

The statistical analyses of the QLS included items' means and standard deviations. Additionally, internal consistency was estimated using Cronbach's alpha, item homogeneity (e.g., corrected item total correlations), and alpha if item deleted. Cronbach's alpha coefficient is the most commonly used estimator of the reliability of tests and scales, with values from 0.70 to 0.79 being interpreted as moderate and estimations of 0.80 or higher being considered indicators of high reliability (Cicchetti 1994).

Convergent validity was obtained by relating the dimensions of the QLS to Herek's dimensions (ATLG), and criterion-related validity was obtained by relating the dimensions of the QLS to variables indicated in the literature: the beliefs about the etiology of the same-sex sexual orientation (BESO), opinions about the marriage and adoption non-rights of individuals with a homosexual sexual orientation (ORSHO), close personal contact, political ideology, and religious beliefs. Pearson's correlations were then calculated. Cohen (1988, 1992) established a conventional interpretation of effect sizes, in which $r < .10$ is considered a small effect, $r = .30$ is a medium-sized effect, and $r = .50$ is a large effect. These guidelines were used throughout this article in interpreting results.

Finally, a multivariate analyses of variance (MANOVA) was used to test the main effects of gender on four dependent variables: valuing of gay and lesbian progress, resistance to heteronormativity, positive beliefs about gay men, and positive beliefs about lesbians. The most robust criterion, Pillai's criterion, was used (Tabachnick and Fidell 2007), and partial eta-square was estimated. Subsequently, if the overall $F$ test showed mean differences, post hoc univariate ANOVA was used to determine which means were statistically different from others. Cohen's $d$ was used as a measure of the magnitude of differences (Navarro et al. 2000). Cohen (1988) also established a conventional interpretation of effect sizes, in which $d = 0.20$ is considered a small effect, $d = 0.50$ is a medium-sized effect, and $d = 0.80$ is a large effect. These guidelines were used throughout this article in interpreting results.

## Results

To ensure normality, Kline (2011) suggested the cutoff of absolute values of 3.0 and 10 for skewness and kurtosis, respectively. The absolute values of skewness and kurtosis for scores on the measurement instruments were within the acceptable range of the normal distribution (univariate skewness ranged from 0.15 to 1.94 and univariate kurtosis ranged from −0.16 to 4.65). Therefore, no adjustments were made to the scores on the variables measured in our study.

## Confirmatory Factor Analysis

One of the aims of the study was to establish the factorial validity of the QLS for heterosexual Italian university students. A theoretical and empirical structure of four factors was found to exist in different samples (Barrientos et al. 2015). Therefore, a confirmatory factor analysis was specified, estimated, and evaluated with this a priori four-factor structure. Overall fit indices mainly supported this structure of the scale: $\chi^2(76) = 223.00$ ($p < .001$), NFI = 0.921, CFI = 0.942, and RMSEA = 0.068 (95 % CI = 0.060–0.076). Altogether, the indices assessed the model as an adequate representation of the observed data. In the study by Barrientos et al. (2015), the fit indices obtained for the shortened version of QLS were similar: NFI = 0.91, CFI = 0.93, and RMSEA = 0.07 (95 % CI = 0.07–0.08). In addition, in the original study by Massey (2009), the fit indices obtained for the PPS were similar—CFI = 0.94, TLI = 0.95, and RMSEA = 0.07—which indicated that our results adequately represent the factorial structure proposed by the scale's authors.

A detailed examination of the factor loadings gave an idea of the analytical fit of the model, complementing the overall fit information (see Fig. 1). All indicators significantly loaded ($p < .01$) in the hypothesized factor, providing support to the adequacy of the four-factor model. Furthermore, all factor loadings were well above the values considered indicative of an adequate consistency with the a priori factor.

As shown in Fig. 1, the items with the least weight were: item 16, "The plight of lesbian women and gay men will improve only when they are in important positions within the system," which belongs to the positive beliefs about lesbians factor; item 3, "Society is enhanced by the diversity offered by lesbians and gays," and item 4, "I see the lesbian and gay movements as a positive thing," which belong to the valuing of gay progress factor.

As shown in Table 1, the estimated internal consistency of the scale may be considered adequate. Furthermore, the highest scores were obtained for valuing of gay progress, positive beliefs about gay men, and positive beliefs about lesbians. The subscale with the lowest scores was resistance to heteronormativity.

As shown in Table 2, the correlations between the QLS short form subscales were statistically significant, but moderate, except for the correlation between positive beliefs about gay men and positive beliefs about lesbians subscales. This correlation was expected since the scales tend to measure similar aspects in equivalent groups.

### Convergent Validity

The study of the relationship between the scores on the subscales of the shortened QLS and those on the ATLG scale by

Herek (1988) showed that there is a statistically significant link between the scores obtained on the two scales.

As shown in Table 2, relations between the shortened QLS dimensions and the ATL, ATG, and ATLG scales were small and negative, except when correlating the valuing of gay progress with both the ATLG subscales and the ATLG scale.

### Criterion-Related Validity

External evidence of the scale was obtained by correlating the four dimensions of the QLS with the ORHSO, BESO, close personal contact with lesbians and gay men, political ideology, and religiosity factors.

As shown in Table 3, the four dimensions of the QLS were negative and related in a manner that was statistically significant to the ORHSO scale. The intensity of the correlation was greater between the valuing of gay progress dimension and the ORHSO (large effect size) as compared with the results for the other dimensions of the QLS (small effect size).

In addition, it can be noted that the four dimensions of the QLS showed positive, statistically significant correlations with the close personal contact factor. Again, the intensity of the correlation was greater between the valuing of gay progress dimension and the close personal contact factor (medium effect size) as compared with the results for the other dimensions of the QLS (small effect size).

On the other hand, the beliefs that sexual orientation is genetic or learned were negative and statistically significant when related to the valuing of progress dimension. The degree of correlation was greater between the beliefs that sexual orientation is learned and valuing of gay progress dimension (large effect size) as compared with the results for the beliefs that sexual orientation is genetic (small effect size). Furthermore, the beliefs that sexual orientation is genetic subscale showed a negative and statistically significant correlation with the resistance to heteronormativity and positive beliefs about lesbians dimensions. These effect sizes were small.

Finally, political ideology and religiosity were negative and statistically significant when related to the valuing of gay progress and the resistance to heteronormativity dimensions. The intensity of the correlations was greater between the valuing of gay progress dimension and political ideology (medium effect size) compared to the relation between the valuing of gay progress dimension and religiosity (small effect size).

### Differences According to Gender

MANOVA was performed on four dependent variables: valuing of gay and lesbian progress, resistance to heteronormativity, positive beliefs about gay men, and positive beliefs about lesbian women, with gender being selected as the independent variable. With the use of Pillai's criterion, the combined dependent variables were significantly affected by gender
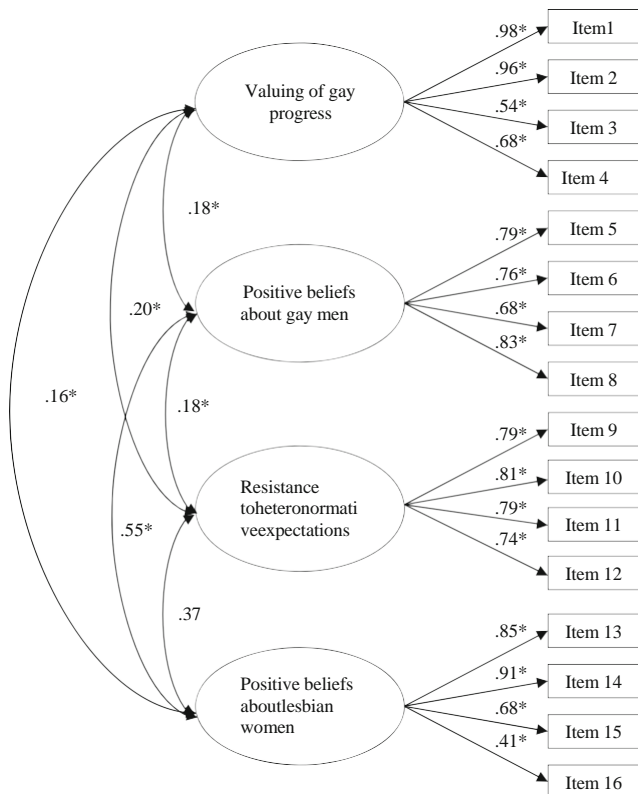


Fig. 1 Standardized factor loadings for the shortened version of the PPS structural equations model. For the sake of clarity, errors are not shown. All factor loadings were statistically significant

| Factors and items | $M$ | SD | Cronbach's alpha (95 % CI) | Item–factor correlation | Alpha if item deleted |
|---|---|---|---|---|---|
| Values gay progress | 4.55 | 1.51 | 0.88 (0.86–0.89) | | |
| Item 1 | 4.68 | 1.76 | | .83 | 0.81 |
| Item 2 | 4.77 | 1.71 | | .81 | 0.82 |
| Item 3 | 4.29 | 1.80 | | .60 | 0.90 |
| Item 4 | 4.45 | 1.81 | | .72 | 0.85 |
| Positive beliefs about gay men | 3.65 | 1.51 | 0.85 (0.83–0.87) | | |
| Item 5 | 3.90 | 1.76 | | .71 | 0.80 |
| Item 6 | 3.73 | 1.92 | | .68 | 0.81 |
| Item 7 | 3 | 1.74 | | .74 | 0.79 |
| Item 8 | 3.97 | 1.86 | | .61 | 0.84 |
| Resistance to heteronormative expectations | 2.09 | 1.32 | 0.88 (0.86–0.89) | | |
| Item 9 | 2.35 | 1.69 | | .74 | 0.84 |
| Item 10 | 2.18 | 1.58 | | .74 | 0.84 |
| Item 11 | 1.93 | 1.41 | | .80 | 0.82 |
| Item 12 | 1.89 | 1.47 | | .67 | 0.87 |
| Positive beliefs about lesbian women | 2.45 | 1.15 | 0.78 (0.75–0.81) | | |
| Item 13 | 2.14 | 1.37 | | .67 | 0.69 |
| Item 14 | 2.11 | 1.31 | | .73 | 0.67 |
| Item 15 | 2.30 | 1.47 | | .62 | 0.71 |
| Item 16 | 3.27 | 1.72 | | .40 | 0.84 |
| Total | 3.19 | 1.66 | 0.85 (0.83–0.87) | | |

($F(4, 537) = 1726.00$, $p < .001$). The results reflected a small association between gender and the combined dependent variables, with a partial $\eta^2 = 0.13$. To investigate the impact of independent variable effect on the individual dependent variables, univariate ANOVAs were performed. The effect of gender was statistically significant in valuing

Table 2 QLS short form subscales: correlation matrix (and 95 % confidence intervals)

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Values gay men and lesbian women's progress | – | | | | | |
| 2. Positive beliefs about gay men | .20*** (0.12–0.28) | – | | | | |
| 3. Resistance to heteronormative expectations | .21*** (0.12–0.28) | .16*** (0.08–0.24) | – | | | |
| 4. Positive beliefs about lesbian women | .22*** (0.14–0.30) | .52*** (0.45–0.57) | .35*** (0.28–0.42) | – | | |
| 5. ATL | −.57*** (−.62 to −0.51) | −.11** (−.19 to −0.03) | −.08 (−0.16 to −0.01) | −.11* (−0.19 to −0.02) | – | |
| 6. ATG | −.75*** (−0.78 to −0.71) | −.18*** (−0.26 to −0.09) | −.16*** (−0.24 to −0.07) | −.17*** (−0.25 to −0.08) | .75*** (0.71–0.79) | – |
| 7. ATLG | −.71*** (−0.75 to −0.67) | −.16*** (−0.24 to −0.08) | −.13*** (−0.21 to −0.05) | −.15*** (−0.23 to −0.07) | .92*** (0.90–0.93) | .95*** (0.94–0.96) |

Higher scores on the ATL, ATG, and ATLG indicate anti-gay/anti-lesbian attitudes. Higher scores on the values gay progress, resistance to heteronormativity, and positive beliefs about lesbian women and gay men indicate pro-gay/pro-lesbian attitudes

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

Table 3 Criterion-related validity: correlations between QLS dimensions and BESO, ORSHO, personal contact, political ideology, and religiosity (and 95 % confidence intervals)

| | VGP | PBG | RH | PBL |
|---|---|---|---|---|
| Learned etiology | −.59*** (−0.64 to −0.53) | −.01 (−0.09 to 0.08) | −.01 (−0.09 to 0.07) | −.04 (−0.12 to 0.04) |
| Genetic etiology | −.12*** (−0.20 to −0.03) | −.08 (−0.16 to 0.01) | −.11*** (−0.19 to −0.03) | −.09* (−0.17 to −0.01) |
| ORHSO | −.65*** (−0.70 to −0.60) | −.13** (−0.21 to −0.05) | −.12*** (−.21 to −0.04) | −.15*** (−0.23 to −0.06) |
| Personal contact | .39*** (0.31–0.46) | .21*** (0.13–0.29) | .16*** (0.07–0.24) | .16*** (0.08–0.24) |
| Political ideology | −.42*** (−0.48 to −0.34) | −.02 (−0.11 to −0.06) | −.12*** (−0.21 to −0.04) | −.07 (−0.15 to −0.02) |
| Religious beliefs | −.24*** (−0.32 to −0.16) | .03 (−0.06 to 0.11) | −.12** (−0.20 to −0.04) | −.06 (−0.14 to 0.03) |

*VGP* value gay men and lesbians' progress, *PBG* positive beliefs about gay men, *RH* resistance to heteronormative expectations, *PBL* positive beliefs about lesbian women

*$p < .05$, **$p < 0.01$, $p < .001$

of gay progress [$F(1, 540) = 16.00$, $p < .001$, Cohen's $d = 0.35$, 95 % CI = 0.18–0.53] and positive beliefs about gay men [$F(1, 540) = 32.90$, $p < .001$, Cohen's $d = 0.50$, 95 % CI = 0.33–0.68]. Concerning the valuing of gay progress dimension, women's average scores ($M = 4.75$, SD = 1.47) were higher than men's scores ($M = 4.23$, SD = 1.52), the size of this difference being small–medium. Regarding the positive beliefs about gay men dimension, women's average scores ($M = 3.95$, SD = 1.49) were once again higher than men's scores ($M = 3.20$, SD = 1.42), the size of this difference being medium.

However, there were no statistically significant differences between women and men on the positive beliefs about lesbians [$F(1, 540) = 1.90$, $p = .169$, Cohen's $d = 0.12$, 95 % CI = −0.05 to 0.30] and resistance to heteronormativity average scores [$F(1, 540) = .09$, $p = .764$, Cohen's $d = 0.03$, 95 % CI = −0.15 to 0.20]. The size of these differences was small.

## Discussion

The purpose of the present study was to provide further evidence for the validity and reliability of the short version of the QLS (Barrientos et al. 2015) using robust methods. Overall, the results show that the scale has a good factor structure, shows satisfying reliability, and has acceptable criterion-related validity when assessed in a sample of 545 heterosexual Italian university students. Thus, the QLS short form can be used to measure modern sexual prejudice successfully.

Concerning factorial validity, the CFA presents adequate fit indices and confirms the four-factor structure proposed by Barrientos et al. (2015), having provided evidence of the stability of the dimensions proposed by the authors. The fit indices are similar to those obtained by Barrientos and colleagues in a sample of heterosexual Chilean university students. Furthermore, all factor loadings are well above the values considered indicative of an adequate consistency with the a

priori factor. Finally, the different QLS factors showed positive and statistically significant correlations with each other, in accordance with the study by Barrientos et al. (2015) and that by Massey (2009).

Addressing the issue of reliability, the short version of the QLS presents adequate internal consistency with high levels of item homogeneity. In addition, the subscales present high alpha coefficients, practically identical to those from the Barrientos et al. (2015) study, in which the alpha coefficients were 0.88 for valuing of gay men and lesbian progress, 0.83 for positive beliefs about gay men, 0.86 for resistance to heteronormative expectations, and 0.80 for positive beliefs about lesbians. Therefore, our findings support the reliability of the instrument with another sample of participants and in a different social context.

The mean scores on the factor valuing of gay and lesbian progress and on positive beliefs about gay men are located above the scale's midpoint. The elevated mean score on the valuing of gay progress scale suggests that these participants respect lesbian and gay individuals, including their place in a diverse society and their advances toward securing equal rights. The high mean score on the positive beliefs about gay men scale suggests that participants have a positive opinion of gay men. The lower scores on the resistance to heteronormative factor suggest that participants embrace conservative standards of sexual morality and traditional gender roles. This aspect is troublesome because conservative standards of sexual morality and traditional gender roles have been associated with negative attitudes toward the LGBT community (Frias-Navarro and Monterde-i-Bort 2012; Massey 2004). The low scores on the positive beliefs about lesbians subscale suggest that participants show subtle forms of negative attitudes toward lesbians (Massey 2009) and might indicate subjective ambivalence toward them (Garner 2013; Hoffarth and Hodson 2014). However, given that the positive beliefs scales measure the likelihood to endorse beliefs that are in some ways the same as positive stereotypes of

gay men and lesbians, low scores on these scales could also mean that participants reject these stereotypes and high scores could mean that they endorse these stereotypes.

Regarding the convergent validity, as expected, the dimensions of the QLS were related negatively to traditional sexual prejudice (ATLG), like the prior studies (Barrientos et al. 2015; Massey 2009), which suggest these dimensions are subtle indicators of anti-homosexual attitudes (Massey 2009). In this sense, for instance, the relation between the resistance to heteronormativity dimension and traditional sexual prejudice might suggest that people who embrace conservative standards of sexual morality and traditional gender roles also tend to show more negative attitudes toward gay men and lesbians (Martinez et al. 2011; Massey 2009). Consequently, the QLS can be used to measure modern sexual prejudice successfully.

With regard to criterion-related validity, as predicted, the dimensions of the QLS were related to close personal contact and supporting lesbian and gay civil rights, which is consistent with findings from the sexual prejudice literature (Baiocco et al. 2013; Pacilli et al. 2011). In this way, participants who had more personal contact with gay men or lesbians demonstrated less rejection of lesbians and gays and showed a higher level of resistance to heteronormativity. Moreover, participants who reported higher support for lesbian and gay civil rights showed more positive attitudes toward LG people in general (e.g., positive beliefs about gay people and valuing of gay and lesbian progress) and presented higher resistance to heteronormativity.

In addition, religiosity and political ideology were related negatively to the valuing of gay progress and resistance to heteronormativity subscales. These findings confirm previous studies (Barrientos et al. 2015; Costa et al. 2014; Jäckle and Wenzelburger 2015; Lingiardi et al. 2016; Lopes et al. 2016; Morrison and Morrison 2011; Pacilli et al. 2011), indicating that non-religious individuals and people with liberal political ideologies are more supportive of advances in the rights of sexual minorities and adhere less to normative cultural gender patterns.

Concerning the participants' beliefs about the etiology of sexual orientation, our findings show a relationship between the rejection of LG people and the belief that the sexual orientation of gay men and lesbians is learned. In fact, the correlations diminish if the participant believes that the sexual orientation of gay men and lesbians is genetic, in accordance with prior research carried out in mostly Catholic countries such as Chile (Frias-Navarro et al. 2014). Recent studies have highlighted the importance of beliefs about the etiology of sexual orientation in explaining sexual prejudice. The belief that the sexual orientation of gay men and lesbians is learned is strongly related to negative attitudes toward gay people and to a diminished support of gay and lesbian rights (Costa et al. 2014; Frias-Navarro et al. 2015, 2016; Sheldon et al. 2007; Smith et al. 2011). These results indicate that the "heteronormative perspective dominates the subjects'

prejudice, given that opting for a non-heterosexual orientation implies deviating from the natural norm and, therefore, being subjected to social rejection" (Frias-Navarro et al. 2014, p. 7).

Finally, few gender differences were found, like in the prior studies (Badenes-Ribera et al. 2016; Barrientos et al. 2015; Lopes et al. 2016; Massey 2009; Montgomery and Stewart 2012), suggesting that gender has a different effect on each dimension of the QLS, and thus, the appearance of a sex difference might depend on which dimension of sexual prejudice is being measured (LaMar and Kite 1998). To understand gender differences in attitudes toward gay people fully, researchers should explore the connections between gender and different dimensions of sexual prejudice (LaMar and Kite 1998; Massey 2009).

Currently, the blatant expression of prejudice is not socially accepted in western societies, leading to the rise of a form of modern prejudice, subtler, more ambiguous, and covert, which can be expressed freely. As Massey et al. (2013) point out, although traditional sexual prejudice may be declining, it has been shown that it is not disappearing altogether, but is instead becoming more subtle, covert, and indirect, manifesting in situations where it can be attributed to a non-prejudiced cause. Thus, the two forms coexist, and may even coexist in one person (Frias-Navarro et al. 2016; Gato et al. 2012; Massey 2009; Massey et al. 2013; Morrison and Morrison 2011). Indeed, traditional and modern sexual prejudice are interrelated, yet statistically distinct (Frias-Navarro and Monterde-i-Bort 2012; Morrison et al. 2009). This implies that the phenomenon of sexual prejudice has become increasingly complex, requiring more complex measures to capture it (LaMar and Kite 1998; Lopes et al. 2016; Massey 2009).

Subtle prejudice is less detectable than its blatant counterpart, but both of them are equally discriminatory and have negative consequences for their targets, affecting their self-esteem, quality of life, and the expression of internalized stigma (Meyer 2003). Additionally, Krolikowski et al. (2016) have shown that the exposure to subtle prejudice increases personal negative attitudes toward gay men and lesbians, concluding that subtle sexual prejudice contributes to perpetuating prejudice toward sexual minorities and deserves further attention.

Providing a new instrument to measure the construct of modern sexual prejudice is essential to capturing the new reality that accompanies the expression of rejection toward LGBT people. In this sense, our study suggested that the QLS short form could be a valid tool for measuring modern sexual prejudice in the Italian heterosexual university student population. This proposal was confirmed by results obtained from the ATLG, which was used as an external criterion to evaluate convergent validity, and also by the results obtained from the BESO, ORSHO, close personal contact, and gender factors, which were used as external criteria to evaluate concurrent and differential validity.

Limitations

Some limitations of the current study need to be mentioned in relation to the interpretation of the findings. The sampling procedure used (e.g., non-probabilistic) limits the external validity of our findings. Furthermore, the population of university students presents a set of particular characteristics: the participants are young, with a high level of education, and under greater pressure to respond with social desirability, and therefore, their opinions cannot be generalized to a larger population. Consequently, future research should be carried out with probabilistic and heterogeneous samples that represent different educational levels of the social structure and not just with university students (Frias-Navarro et al. 2016). Additionally, in order to understand better how to create social change, future research should also try to capture the attitudes and beliefs of those who are in positions of power, including those who can influence government policies (Webb and Chonody 2014).

On the other hand, the limited nature of the close personal contact with gay people measure also conditions the findings. The measure consists of one item that groups family and friends, lesbians, and gay men together; it does not assess the type of contact (favorable/unfavorable) that occurred, and it does not differentiate between those who have many close gay or lesbian friends and those who have one or two. Therefore, further research is necessary to analyze the contact variable in today's societies, where it is likely that its traditional operationalization as having or not having contact with people gay must now be studied with other dimensions, such as the quality of the contact and its affective assessment.

Another methodological limitation is related to the religiosity and political ideology measures, which were also assessed with one item (e.g., with a Likert-type index ranging, respectively, from liberal to conservative and from less religious to more religious, respectively) and were only indicative of personal beliefs. Nevertheless, as Worthen et al. (2016) point out, although the operationalization of political ideology on one only item may seem rather unsophisticated, studies indicate that most people organize their political allegiance in this simplistic way. Moreover, we suspect a possible effect of social desirability, as always occurs when data are collected using self-report questionnaires.

Finally, we acknowledge that the data are cross-sectional and, therefore, we cannot draw inferences about cause-and-effect relationships. It is important to conduct longitudinal research to help scholars understand how the relations between negative attitudes toward gays and lesbians, attitudes to the origin of same-sex sexual orientation, opinions about the marriage and adoption rights of LG individuals, close personal contact, religiosity, and political ideology unfold over time.

Nevertheless, our findings are in keeping with the research trends on sexism, political ideology, religiosity, the etiology of homosexuality, and contact with lesbian and gay individuals (Herek and McLemore 2013; Lopes et al. 2016; Morrison et al. 2009). In closing, we believe that the results of this study may have important implications for reducing sexual prejudice. Having measurement instruments that have been adapted to the new expressions of rejection and prejudice against gay men and lesbians is crucial for dealing with homophobia. We might think that great advances have been made in tolerance toward and acceptance of the sexual orientation of gay men and lesbian women, but the heteronormative perspective unfortunately continues to exert a strong influence over our everyday existence. The subtle expression of prejudice has replaced openly hostile attitudes of rejection toward LGBT individuals (e.g., Frias-Navarro et al. 2016), but its effects continue to be harmful. Subtle forms of sexual prejudice contribute to the development of internal homophobia, which in turn undermines the development of a positive LGTB identity (Burn et al. 2005).

Understanding sexual prejudice is essential to promoting equality, tolerance, and supportive attitudes and developing better prevention policies and practices. To this end, the 16-item QLS short form has shown satisfactory levels of reliability and validity as an instrument to measure subtle sexual prejudice in an Italian sample, therefore making it possible to measure a more sophisticated and subtle expression of so-called modern sexual prejudice, beyond the traditional terms of heterosexism, heterocentrism, or sexual prejudice (Martinez et al. 2011). Furthermore, this new four-factor version enables positive beliefs about gay men and lesbians to be measured separately, allowing the differentiated study of sexual minorities by gender. It has been shown that modern homonegativity is directed mainly toward gay men rather than lesbians (Morrison and Morrison 2011) and also that both heterosexual and gay men experience more negative feelings with respect to effeminate gay men than masculine gay men (Lopes et al. 2016).

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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.

## Appendix

Table 4  QLS items by subscale

| Items | Item content |
| --- | --- |

**Valuing of gay and lesbian progress**

1  If my son told me he felt he might be gay, I would encourage him to explore that aspect of himself.
  *Se miofiglio mi dicesse che potrebbeessere gay, lo incoraggerei ad esplorarequestosuoaspetto.*

2  If my daughter told me she thought she might be lesbian, I would encourage her to explore that aspect of herself.
  *Se miafiglia mi dicesse che potrebbeessere lesbica, la incoraggerei ad esplorarequestosuoaspetto.*

3  Society is enhanced by the diversity offered for lesbian women and gay people.
  *La società è potenziata dalla diversità che viene offerta dalle persone omosessuali.*

4  I see the lesbian and gay movements as a positive thing.
  *Vedo i movimenti LGBT come una cosa positiva.*

**Positive beliefs about gay men**

5  Gay men are more emotionally available than heterosexuals.
  *Gliuomini gay sonopiù emotivamente disponibilirispetto a quellieterosessuali.*

6  Straight men have a lot to learn from gay men about being friends with women.
  *Gliuominieterosessualihannomolto da impararedai gay su come essereamicidelledonne.*

7  Gay men are more creative than heterosexual men.
  *I gay sono più creativi degli eterosessuali.*

8  Being gay can make a man more compassionate.
  *Essere gay puòrendere un uomopiùsensibile.*

**Resistance to heteronormative expectation**

9  I feel limited by the sexual rules and norms of society.
  *Mi sentolimitato/a dalle regole e norme sessualidellasocietà.*

10  I feel restricted by the expectations people have of me because of my gender.
  *Mi sentolimitato/a dalle aspettative che glialtrinutrononeimieiconfronti per* via *del mio genere.*

11  I feel limited by the sexual behaviors that are expected of me.
  *Mi sentolimitato/a daicomportamentisessuali che ci si aspetta da me.*

12  I feel restricted by the sexual label people attach to me.
  *Mi sentoconfinato/a dall'etichettasessuale che mi assegnanoglialtri.*

**Positive beliefs about lesbians**

13  I find lesbian women to be more in touch with their own emotions than other women.
  *Trovo che le lesbichesianopiù in contatto conle loro emozionirispettoallealtredonne.*

14  I find lesbian women to be more emotionally available than other women.
  *Trovo che le lesbichesianopiù emotivamente disponibilirispettoallealtredonne.*

15  Lesbian women have a lot to teach other women about being independent.
  *Le lesbichehannomolto da insegnareallealtredonne su come essereindipendenti.*

16  The plight of lesbian women and gay men will improve only when they are in important positions within the system.
  *La difficilecondizione di lesbiche e uomini gay migliorerà solo quandooccuperannoruolirilevantiall'interno del sistema sociale*

Italian items are printed in italics

# References

Anderson, K. J., & Kanner, M. (2011). Inventing a gay agenda: students' perceptions of lesbian and gay professors. *Journal of Applied Social Psychology, 41*, 1538–1564. doi:10.1111/j.1559-1816.2011.00757.x.

Babakus, E., Ferguson, C. E., & Jöreskog, K. G. (1987). The sensitivity of confirmatory factor maximum likelihood factor analysis to violations of measurement scale and distributional assumptions. *Journal of Marketing Research, 37*, 72–141.

Badenes-Ribera, L., Frias-Navarro, D., Monterde-I-Bort, H., & Pascual-Soler, M. (2016). Spanish validation of the Polymorphous Prejudice Scale (PPS) (short version) in a sample of university students. *Journal of Homosexuality*. doi:10.1080/00918369.2016.1223349.

Baiocco, R., Argalia, M., & Laghi, F. (2014). Marriage desires among Italian young adults: the role of internalized sexual stigma. *Journal of Family Issues, 35*, 181–200. doi:10.1177/0192513X12464872.

Baiocco, R., Nardelli, N., Pezzuti, L., & Lingiardi, V. (2013). Attitudes of Italian heterosexual older adults towards lesbian and gay parenting. *Sexuality Research and Social Policy, 10*, 285–292. doi:10.1007/s13178-013-0129-2.

Balluerka, N., Gorostiaga, A., Alonso-Arbiol, I., & Haranburu, M. (2007). La adaptación de instrumentos de medida de unas culturas a otras: una perspectiva práctica [Adapting measuring instruments across cultures: a practical perspective]. *Psicothema, 19*, 124–133.

Barrientos, J., Cardenas, M., Estrada, C., Adaos, R., Carvajal, J., Peña, M., & Villar, J. (2015). Adaptation and validation of the Polymorphous Prejudice Scale (PPS)—a short form—in a sample of heterosexual Chilean college students. *International Journal of Sexual Health, 27*, 235–248. doi:10.1080/19317611.2014.957795.

Barrientos, J., Cardenas, M., Gomez, F., & Frias-Navarro, D. (2013). Assessing the dimensionality of beliefs about children's adjustment in same-sex families scale (BCASSFS) in Chile. *Sexuality Research & Social Policy, 10*, 43–51. doi:10.1007/s13178-012-0107-0.

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. doi:10.1111/j.1747-1346.2007.00160.x.

Browne, M., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park: Sage.

Burn, S. M., Kadlec, K., & Rexer, R. (2005). Effects of subtle heterosexism on gays, lesbians, bisexuals. *Journal of Homosexuality, 49*, 23–38. doi:10.1300/J082v49n02_02.

Byrne, B. M. (2006). *Structural equation modeling with EQS: basic concepts, applications, and programming* (2nd ed.). New York: Routledge.

Cardenas, M., Barrientos, J., Gomez, F., & Frias-Navarro, D. (2012). Attitudes toward gay men and lesbians and their relationship with gender role beliefs in a sample of Chilean university students. *International Journal of Sexual Health, 24*, 226–236. doi:10.1080/19317611.2012.700687.

Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment, 6*, 284–290. doi:10.1037/1040-3590.6.4.284.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New Jersey: Lawrence Erlbaum.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*, 155–159. doi:10.1037/0033-2909.112.1.155.

Collier, K. L., Bos, H. M. W., & Sandfort, T. G. M. (2012). Intergroup contact, attitudes toward homosexuality, and the role of acceptance of gender non-conformity in young adolescents. *Journal of Adolescence, 35*, 899–907. doi:10.1016/j.adolescence.2011.12.010.

Cooley, J. J., & Burkholder, G. J. (2011). Using video and contact to change attitudes toward gay men and lesbians. *Journal of Social, Behavioral and Health Sciences, 5*, 83–90.

Costa, P. A., & Davies, M. (2012). Portuguese adolescents' attitudes toward sexual minorities: transphobia, homophobia and gender role beliefs. *Journal of Homosexuality, 59*, 1424–1442. doi:10.1080/00918369.2012.724944.

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*, 1667–1686. doi:10.1080/00918369.2014.951253.

Costa, P. A., Pereira, H., & Leal, I. (2015). вThe contact hypothesis^ and attitudes toward same-sex parenting. *Sexuality Research & Social Policy, 12*, 125–136. doi:10.1007/s13178-014-0171-8.

Cowan, G., Heiple, B., Marquez, C., Khatchadourian, D., & Mcnevin, M. (2005). Heterosexuals' attitudes toward hate crimes and hate speech against gays and lesbians: old-fashioned and modern heterosexism. *Journal of Homosexuality, 49*, 67–82. doi:10.1300/J082v49n02_04.

Finney, S. J., & Distefano, C. (2006). Non-normal and categorical data in SEM. In G. R. Hancock & R. O. Mueller (Eds.), *Structural equation modeling: a second course* (pp. 269–314). Greenwich, CO: Information Age Publishing.

Frias-Navarro, D. (2009a). *Scale of beliefs about the etiology of sexual orientation (BESO)*. Spain: University of Valencia. http://www.uv.es/friasnav/FriasNavarroBESOspain.

Frias-Navarro, D. (2009b). *Opinions about the non-rights of individuals with a homosexual sexual orientation (ORHSO)*. Spain: University of Valencia. http://www.uv.es/friasnav/FriasNavarroORHSOspain.

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. doi:10.1080/00918369.2012.720505.

Frias-Navarro, D., Badenes-Ribera, L., & Monterde-I-Bort, H. (2016). Evidence of validity of the beliefs about children's adjustment in same-sex families scale. *Sexuality Research and Social Policy*. doi:10.1007/s13178-016-0246-9.

Frias-Navarro, D., Barrientos-Delgado, J., Badenes-Ribera, L., Monterde-I-Bort, H., & Cardenas-Castro, M. (2013). Sex differences in sexual prejudice. Contact as mediator variable. *European Journal of Child Development, Education and Psychopathology, 1*, 45–58. doi:10.1989%2Fejpad.v1i1.5.

Frias-Navarro, D., Monterde-I-Bort, H., Barrientos Delgado, J., Badenes-Ribera, L., & Cardenas Castro, M. (2014). Beliefs about children's adjustment in same-sex families: Spanish and Chilean university students. *Spanish Journal of Psychology, 17*, 1–9. doi:10.1017/sjp.2014.5.

Frias-Navarro, D., Monterde-I-Bort, H., Pascual-Soler, M., & Badenes-Ribera, L. (2015). Etiology of homosexuality and attitudes toward same-sex parenting: results from a randomized study. *Journal of Sex Research, 52*, 151–161. doi:10.1080/00224499.2013.802757.

Garner, A. (2013). Ambivalence, the intergroup contact hypothesis, and attitudes about gay rights. *Politics and Policy, 41*, 241–266. doi:10.1111/polp.12010.

Gato, J., Fontaine, A. M., & Carneiro, N. S. (2012). Multidimensional scale of attitudes toward lesbian and gay men: construction and preliminary validation. *Paidéia, 22*, 11–20. doi:10.1590/S0103-863X2012000100003.

Hegarty, P., & Massey, S. (2006). Anti-homosexual prejudice…as opposed to what? Queer theory and the social psychology of anti-homosexual attitudes. *Journal of Homosexuality, 52*, 47–71. doi:10.1300/J082v52n01_03.

Herek, G. M. (1988). Heterosexuals' attitudes toward lesbians and gay men: correlates and gender differences. *Journal of Sex Research, 25*, 451–477. doi:10.1080/00224498809551476.

Herek, G. M. (2000). The psychology of sexual prejudice. *Current Directions in Psychological Sciences, 9*, 19–22. doi:10.1111/1467-8721.00051.

Herek, G. M. (2010). Sexual orientation differences as deficits: science and stigma in the history of American psychology. *Perspectives on Psychological Science, 5*, 693–699. doi:10.1177/1745691610388770.

Herek, G. M., & Capitanio, J. P. (1996). ʙSome of my best friends^: intergroup contact, concealable stigma, and heterosexuals' attitudes toward gay men and lesbians. *Personality and Social Psychology Bulletin, 22*, 412–424. doi:10.1177/0146167296224007.

Herek, G. M., & Mclemore, K. A. (2013). Sexual prejudice. *Annual Review of Psychology, 64*, 309–333. doi:10.1146/annurev-psych-113011-143826.

Hoffarth, M. (2013). *Subjective ambivalence and the expression of anti-gay bias*. Thesis submitted in partial fulfillment of the requirements for the degree Master of Arts Department of Psychology, Brock University, St. Catharine's, Ontario, Canada.

Hoffarth, M. R., & Hodson, G. (2014). Is subjective ambivalence toward gays a modern form of bias? *Personality and Individual Differences, 69*, 75–80. doi:10.1016/j.paid.2014.05.014.

Hu, L., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55.

Hutchinson, S. R., & Olmos, A. (1998). Behavior of descriptive fit indexes in confirmatory factor analysis using ordered categorical data. *Structural Equation Modeling, 5*, 344–364.

Jäckle, S., & Wenzelburger, G. (2015). Religion, religiosity and the attitudes towards homosexuality—a multi-level analysis of 79 countries. *Journal of Homosexuality, 62*, 207–241. doi:10.1080/00918369.2014.969071.

Katz, I., & Hass, R. G. (1988). Racial ambivalence and American value conflict: correlational and priming studies of dual cognitive structures. *Journal of Personality and Social Psychology, 55*, 893–905. doi:10.1037/0022-3514.55.6.893.

Kitzinger, C. (1987). *The social construction of lesbianism*. London: Sage.

Kline, R. (2011). *Principles and practice of structural equations modelling* (3rd ed.). London: Guilford.

Krolikowski, A. M., Rinella, M., & Ratcliff, J. J. (2016). The influence of the expression of subtle and blatant sexual prejudice on personal prejudice and identification with the expresser. *Journal of Homosexuality, 63*, 228–249. doi:10.1080/00918369.2015.1083776.

Lamar, L., & Kite, M. (1998). Sex differences in attitudes toward gay men and lesbians: a multidimensional perspective. *Journal of Sex Research, 35*, 189–196. doi:10.1080/00224499809551932.

Lingiardi, V., Falanga, S., & D'Augelli, A. R. (2005). The evaluation of homophobia in an Italian sample. *Archives of Sexual Behavior, 34*, 81–93. doi:10.1007/s10508-005-1002-z.

Lingiardi, V., Nardelli, N., Loverno, S., Falanga, S., Di Chiacchio, C., Tanzilli, A., & Baiocco, R. (2016). Homonegativity in Italy: cultural issues, personality characteristics, and demographic correlates with negative attitudes toward lesbians and gay men. *Sexuality Research and Social Policy, 13*, 95–108. doi:10.1007/s13178-015-0197-6.

Lopes, D., de Oliveira, J. M., Nogueira, C., & Grave, R. (2016). The social determinants of polymorphous prejudice against lesbian and gay individuals: the case of Portugal. *Sexuality Research and Social Policy*. doi:10.1007/s13178-016-0230-4.

Martinez, P., Barsky, A., & Singleton, S. (2011). Exploring queer consciousness among social workers. *Journal of Gay & Lesbian Social Services, 23*(2), 296–315. doi:10.1080/10538720.2010.541026.

Massey, S. G. (2004). *Polymorphous prejudice: liberating the measurement of heterosexuals' attitudes toward lesbians and gay men*. Unpublished doctoral dissertation, City University of New York.

Massey, S. (2009). Polymorphous prejudice: liberating the measurement of heterosexuals' attitudes toward lesbians and gay men. *Journal of Homosexuality, 56*, 147–172. doi:10.1080/00918360802623131.

Massey, S., 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*, 129–151. doi:10.1080/1550428X.2013.765257.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. *Psychological Bulletin, 129*, 674–697. doi:10.1037/0033-2909.129.5.674.

Montgomery, S. A., & Stewart, A. J. (2012). Privileged allies in lesbian and gay rights activism: gender, generation, and resistance to heteronormativity. *Journal of Social Issues, 68*, 162–177. doi:10.1111/j.1540-4560.2012.01742.x.

Morrison, M. A., & Morrison, T. G. (2003). Development and validation of a scale measuring modern prejudice toward gay men and lesbians. *Journal of Homosexuality, 43*, 15–37. doi:10.1300/J082v43n02_02.

Morrison, M. A., & Morrison, T. G. (2011). Sexual orientation bias toward gay men and lesbian women: modern homonegative attitudes and their association with discriminatory behavioral intentions. *Journal of Applied Social Psychology, 41*(11), 2573–2599. doi:10.1111/j.1559-1816.2011.00838.x.

Morrison, M. A., Morrison, T. G., & Franklin, R. (2009). Modern and old-fashioned homonegativity among samples of Canadian and American university students. *Journal of Cross-Cultural Psychology, 40*, 523–542. doi:10.1177/0022022109335053.

Navarro, M. D. F., Llobell, J. P., & Pérez, J. F. G. (2000). Tamaño del efecto del tratamiento y significación estadística [Effect size of the treatment and statistical significance]. *Psicothema, 12*, 236–240.

Olson, R. R., Cadge, W., & Harrison, J. T. (2006). Religion and public opinion about same-sex marriage. *Social Science Quarterly, 87*, 340–360. doi:10.1111/j.1540-6237.2006.00384.x.

Overby, L. M. (2014). Etiology and attitudes: beliefs about the origins of homosexuality and their implications for public policy. *Journal of Homosexuality, 61*, 568–587. doi:10.1080/00918369.2013.806175.

Pacilli, M. G., Taurino, A., Jost, J. T., & van der Toorn, J. (2011). System justification, right-wing conservatism, and internalized homophobia: gay and lesbian attitudes toward same-sex parenting in Italy. *Sex Roles, 65*, 580–595. doi:10.1007/s11199-011-9969-5.

Prati, G., Pietrantoni, L., & D'Augelli, A. R. (2011). Aspects of homophobia in Italian high schools: students' attitudes and perceptions of school climate. *Journal of Applied Social Psychology, 41*, 2600–2620. doi:10.1111/j.1559-1816.2011.00842.x.

Raja, S., & Stokes, J. P. (1998). Assessing attitudes toward lesbians and gay men: the modern homophobia scale. *Journal of Gay, Lesbian, and Bisexual Identity, 3*, 113–134.

Salvati, M., Ioverno, S., Giacomantonio, M., & Baiocco, R. (2016). Attitude toward gay men in an Italian sample: masculinity and sexual orientation make a difference. *Sexuality Research and Social Policy, 13*, 109. doi:10.1007/s13178-016-0218-0.

Schwartz, J. (2010). Investigating differences in public support for gay rights issues. *Journal of Homosexuality, 27*, 748–759. doi:10.1080/00918369.2010.485875.

Schwartz, J. P., & Lindley, L. D. (2005). Religious fundamentalism and attachment: prediction of homophobia. *The International Journal for the Psychology of Religion, 15*, 145–157. doi:10.1207/s15327582ijpr1502_3.

Sellers, R. M., Rowly, S. A. J., Chavous, T. M., Shelton, J. N., & Smith, M. A. (1997). Multidimensional inventory of black identity: a preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology, 73*, 805–815. doi:10.1037/0022-3514.73.4.805.

Sheldon, J. P., Pfeffer, C. A., Javaratne, T. E., Feldbaum, M., & Petty, E. M. (2007). Beliefs about etiology of homosexuality and about the ramifications of discovering its possible genetic origin. *Journal of Homosexuality, 52*, 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*, 1110–1131. doi:10.1080/00918369.2011.598417.

Steiger, J. H., & Lind, C. (1980). *Statistically based tests for the number of common factors*. Paper presented at the Annual Meeting of the Psychometric Society, Iowa City, IA.

Swank, E., & Raiz, L. (2010). Predicting the support of same-sex relationship rights among social work students. *Journal of Gay & Lesbian Social Services, 22*, 149–164. doi:10.1080/10538720903332552.

Tabachnick, B., & Fidell, L. (2007). *Using multivariate statistics*. New York: Harper Collins.

Tanaka, J. S. (1993). Multifaceted conceptions of fit in structural equation models. In K. A. Bollen (Ed.), *Testing structural equation models* (pp. 10–39). Newbury Park: Sage.

Ullman, J. B. (1996). Structural equation modeling. In B. Tabachnick & L. Fidell (Eds.), *Using multivariate statistics* (pp. 709–812). New York: HarperCollins.

Webb, S. N., & Chonody, J. (2014). Heterosexual attitudes toward same-sex marriage: the influence of attitudes toward same-sex parenting. *Journal of GLBT Family Studies, 10*, 404–421. doi:10.1080/1550428X.2013.832644.

Worthen, M. G. F., Lingiardi, V., & Caristo, C. (2016). The roles of politics, feminism, and religion in attitudes toward LGBT individuals: a cross-cultural study of college students in the USA, Italy, and Spain. *Sexuality Research and Social Policy*. doi:10.1007/s13178-016-0244-y.