Assessing Prejudice Toward Two-Father Parenting and Two-Mother Parenting: The Beliefs on Same-Sex Parenting Scale

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Abstract

This article describes two interrelated studies aimed at investigating beliefs and stereotypes on same-sex parenting through the development and validation of the Beliefs on Same-Sex-Parenting (BOSSP) scale. The BOSSP evaluates specific prejudices on same-sex couples' parental competencies that are not necessarily related to homonegative arguments. Moreover, the BOSSP assesses attitudes toward two-father parenting and two-mother parenting separately. In study 1 (301 heterosexual participants), exploratory factor analysis suggested a 11-item scale for both attitudes towards two-father families and two- mother families, with 2 factors as follows: Parenting Skills, evaluating beliefs on same-sex couples' ability to take care of their children, and *Parental Adjustment*, assessing beliefs on the impact of same-sex parenting-related challenges on children wellbeing. Support for convergent validity between scores on the BOSSP factors and theoretically related measures were also provided. In study 2 (346 heterosexual participants), confirmatory factor analysis indicated that the 2-factor model was the best fit. Both studies documented test-retest reliability of each of the BOSSP factors. Finally, results revealed that more negative attitudes toward same-sex parenting were held by men and were associated with negative opinions on reproductive techniques. The innovative characteristics of the BOSSP scale and implications for future practice are discussed.

Introduction

The U.S. Census Bureau estimated that over 135,000 US same-sex couples were raising children (including own children and nonrelatives of the householder) under the age of 18, and that approximately 118,000 same-sex couples had their own children in 2014 (US Census Bureau, 2014). In Europe, the different legal and social contexts make the number of children with same-sex parents more difficult to estimate. In Italy, where this study is conducted, the latest official statistics indicated that around 100,000 children had at least one gay or lesbian parent in 2006 (Baiocco & Laghi, 2013; Baiocco, Argalia, & Laghi, 2014).

Consistent evidence (Golombok, 2015) has emerged regarding the diversity of parenting circumstances within which the children of same-sex couples are raised. Some children may have been born in a previous heterosexual relationship, others may have been adopted, or conceived via medically assisted reproduction, e.g. donor insemination for female couples and surrogacy for male couples (Golombok, 2015).

Despite the abundance of studies reporting no or minimal differences between same-sex and heterosexual couples in their parenting skills (American Psychological Association, 2005; Biblarz & Stacey, 2010; Carone, Baiocco, Ioverno, Chirumbolo, & Lingiardi, 2016; Golombok, Perry, Burston, Murray, Mooney-Somers, Stevens, & Golding., 2003) and in their children's adjustment (Baiocco et al., 2015; Fedewa, Black, & Ahn, 2015; Patterson, 2016; Tasker & Patterson, 2008), the belief that having two parents of the opposite sex is a prerequisite for a healthy child development, still prevails in the public debate (Baiocco & Ioverno, 2016; Golombok, 2015; Lingiardi & Carone, 2016a, 2016b). Alongside, it is commonly assumed that mothering and fathering are conceptually different from each other, although there is no accordance in the literature to support this view (Fagan, Day, Lamb, & Cabrera, 2014). In fact, a review by Fagan et al. (2014) found that mothers and fathers are

similar in terms of parenting roles, parent-child relationships, influence on their children's adjustment, and amount of time spent with children.

Given the ongoing and controversial nature of the same-sex parenting in the public debate, many scholars have taken a keen interest in understanding what factors influence the support for same-sex parent families (Baiocco, Nardelli, Pezzuti, & Lingiardi, 2013; Gato & Fontaine, 2016; Massey, Merriwether, & Garcia, 2013; Petruccelli, Baiocco, Ioverno, Pistella, & D'Urso, 2015), and rights for lesbian, gay, and bisexual people (Fisher et al., 2016; Lingiardi et al., 2016; Salvati, Ioverno, Giacomantonio, & Baiocco, 2016; Worthen, Lingiardi, & Caristo, 2016). Consistently, studies indicate that cultural factors and demographic characteristics may influence such attitudes. Specifically, men, older generations, lowly educated people, religious individuals, and political conservatives are more likely to object to same-sex parenting (Baiocco et al., 2013; Hollekim, Slaatten, & Anderssen, 2012; Lingiardi et al., 2016; Massey, 2007; Massey et al., 2013; Pacilli, Taurino, Jost, & van der Toorn, 2011).

Using a thematic analysis of media data collected between 1997 and 2000 and six focus groups, Clarke (2001) identified a repeated use of a number of arguments against same-sex parenting. These objections were of two types: arguments on the immorality of same-sex parenting, and arguments based on concern about the well-being of children who are raised with same-sex parents. These findings are consistent with more recent studies on attitudes towards same-sex parenting (Becker & Todd, 2013; Frias-Navarro & Monterde-i-Bort, 2012; Gato & Fontaine, 2013, 2016). The prevalence of objections across studies was mostly based on concern that children with same-sex parents are more likely to report psychological problems, to develop atypical gender and sexual identities, and to experience strained peer relationships, stigma and teasing. (Hollekim et al., 2012; Morse, McLaren, & McLachlan, 2007).

Several studies have also shown that attitudes are typically more positive towards two-mother families than two-father families. This may reflect the cultural assumption that men are less nurturing than women and that fatherhood is a peripheral aspect of the masculine identity compared to motherhood for women (Biblarz & Stacey, 2010; Fiske, Cuddy, Glick, & Xu, 2002). However, this difference was not found by other scholars (Camilleri & Ryan, 2006; Crawford, McLeod, Zamboni, & Jordan, 1999; Fraser, Fish, & Mackenzie, 1995; Gato & Fontaine, 2013).

All in all, several studies on attitudes towards same-sex parenting emerged in the last decades with different approaches: since the 1970s, items such as "homosexuals should not be allowed to raise children" and "male homosexual couples should be allowed to adopt children the same as heterosexual couples" have been included in many measures of antigay prejudice (Herek, 1984; MacDonald et al., 1973). These measures primarily assessed attitudes in terms of approval or disapproval, without considering specific prejudices on same-sex parenting.

More recently, some scholars have used vignettes to explore prejudice on same-sex parenting. Through this method, participants were asked to read a series of vignettes describing family situations with lesbian, gay or heterosexual parents, and to evaluate some aspects related to parental competencies (Camilleri & Ryan, 2006; Crawford et al., 1999; Crawford & Solliday, 1996; Fraser et al., 1995; Massey, 2007; Massey et al., 2013; McLeod et al., 1999; Morse et al., 2007; Rye & Meaney, 2010) and/or child development (Gato & Fontaine, 2013; King & Black, 1999; Massey, 2007; McLeod et al., 1999; Morse et al., 2007; Rye & Meaney, 2010).

A third approach has consisted in developing attitude scales, such as the "Attitudes Toward Gay and Lesbian Parenting Scale" (Costa, Almeida, Anselmo, Ferreira, Pereira, & Leal, 2014), where participants were asked to rate their agreement with several sentences

referred to same-sex parenting (i.e. "Gay and lesbian parents do not care about children's best interests"; "Children of gay and lesbian parents do not have the needed masculine and feminine references for their normal development"; "The difficulties that gay and lesbian parents face prepare them to be good parents"; "Children of gay and lesbian parents are more accepting of other people's differences").

Although the latter measures evaluate more specifically the prejudice on same-sex parent families, a review of existing literature suggests that there is a lack of knowledge about other important aspects of prejudice on this topic. For example, most measures did not consider that negative attitudes may involve an objective concern, often not based on homonegative prejudices, that same-sex parent families face specific challenges that can negatively influence children's adjustment. Other negative attitudes, based mostly on a traditional gendered perspective of family which associates parenting roles to biological sexes, may more directly refer to prejudices on same-sex couples' parenting skills. Finally, most measures are not sensitive to the distinction between attitudes toward two-mother families and two-father families.

The present study was designed to expand the literature on attitudes towards same-sex parenting exploring relatively new aspects of prejudice that, in our knowledge, have not been examined in previous research. Specifically, we conducted two studies to develop an instrument, the Beliefs on Same-Sex Parenting (BOSSP) scale, to assess attitudes toward same-sex parent families from a novel framework by considering two main aspects: presence of prejudice on same-sex couples' ability to parent; the absence of moralistic or ideological opinions that are closer to the construct of homonegative attitudes rather than the construct of attitudes toward same-sex parenting. Moreover, in developing the scale, we sought to distinguish attitudes toward two-mother parenting from attitudes toward two-father parenting in order to provide more informative elements about the construct.

We hypothesized that: 1) attitudes towards same-sex parenting are composed of two different kind of prejudices: prejudices on the negative effects of same-sex parents' social challenges on children's adjustment; prejudices on same-sex couples' basic parenting skills; 2) the BOSSP scores are consistent with other measures of theoretically related constructs evaluating beliefs on children's adjustment in same-sex families and homonegative attitudes; 3) consistently with other studies on attitudes toward same-sex parenting (Baiocco et al., 2013; Petruccelli et al, 2015), men show more negative attitudes on the BOSSP scale than women; 4) beliefs on same-sex parenting are associated with attitudes towards medical assisted reproduction procedures practiced by same-sex couples to become parents.

Method

Initial Scale Construction

The construction of the BOSSP scale passed through different phases. Our conceptualization of attitudes toward same-sex parenting and subsequent item generation were based on two main components: the presence of specific prejudice on same-sex couples' parental skills and exclusion of prejudices based on homonegative or moralistic arguments. Importantly, the items were designed to distinguish attitudes toward two-father parenting from attitudes toward two-mother parenting.

Item development was first informed by the prior literature on attitudes toward same-sex parenting (see, Costa et al., 2014; Frias-Navarro & Monterde-i-Bort, 2012; Massey, 2007; Massey et al., 2013). Qualitative methods were used to better identify the most relevant dimensions of our construct. Specifically, we carried out two focus groups: the first group was composed of faculty (n = 4) and graduate students (n = 8) with experience in the study of prejudice and social attitudes; the second group was composed of lesbian, gay and bisexual (LGB) parents (n = 8) recruited from LGBT associations. This phase generated an initial item pool of 46 items (23 on two-father parenting and 23 on two-mother parenting). The

items were then reviewed by 10 LGB parents and 3 scholars whose programs of research addressed same-sex parenting and discriminatory attitudes. The reviewers rated each item on content appropriateness and clarity using a 5-point Likert-type scale (1 *not clear/appropriate*, 5 *very clear/appropriate*). Items with average ratings below 3 were removed. To improve clarity and parsimony, two of the authors with experience with scale construction reviewed and edited the items and rewrite items with similar contents as a single item. All authors agreed on the final wording and number of items.

These steps resulted in the retention of 28 usable items (14 items for two-father parenting and 14 items for two-mother parenting). A series of data reduction strategies, that included exploratory factor and internal consistency reliability analyses, were used in this study to explore the potential factors underlying our attitudes toward same-sex parenting construct. The final version of the scale is presented in the results section.

Participants and Procedures

Sample 1

301 participants who self-identified as heterosexual were recruited in the first sample. using snowball procedures. Of the all sample, 138 (45.85%) were men and 163 (54.15%) were women ($M_{\rm age}$ = 29.54; $SD_{\rm age}$ = 9.25). Men and women did not differ significantly in age, t(299) = -.68, p = .494. The first study was mostly conducted in Rome (Italy).

Sample 2

Participants in the second study completed surveys at two time points 4 weeks apart. The study included a sample of 346 university students (19.00% men and 80.99% women, $M_{\rm age} = 23.00$; $SD_{\rm age} = 4.69$) at time 1. Of the participants at time 1 a subsample (232, 67.05% of the total sample) completed the survey at time 2 (17.83% men and 82.17% women, $M_{\rm age} = 22.86$; $SD_{\rm age} = 4.19$). The recruitment was mostly conducted in Padua (43.06% of the sample at time 1) and Rome (56.94% of the sample at time 1). These cities are located respectively in

the North and Center of Italy. Men and women did not differ significantly in age, t(345) = .73, p = 468.

Measures

Beliefs on Same-Sex Parenting. The BOSSP was used in samples 1 and 2 to measure beliefs on same-sex couples' parenting skills. The BOSSP includes two forms: a first form evaluating the attitudes toward two-father parenting (two-father form) and a second form evaluating the attitudes toward two-mother parenting (two-mother form). Each item was associated with a 5-point Likert's type scale from *completely disagree* (1) to *completely agree* (5). The psychometric properties of the instrument are presented in this study.

The attitudes toward same-sex parenting construct underlying this scale was conceptualized as composed of two different kinds of attitudes: a) attitudes based on beliefs that same-sex families face specific challenges that can negatively influence children's normal development (an example item is "Creating a safe social environment for the children"); b) attitudes based on opinions about same-sex couples' basic parenting skills (an example item is "Taking care of the child's diet").

Scale on Beliefs on Children's Adjustment in Same-Sex Families (SBCASSF; Frias-Navarro & Monterde-i-Bort, 2012). The SBCASSF was used only in study 1 to measure beliefs on the effects of parenting practices of same-sex couples on their children's development. Items were rated on a 5-point Likert-type scale ranging from 1 (completely agree) to 5 (completely disagree). The SBCASSF is composed of two subscales: Individual Opposition (7 items) that reflects the personal beliefs on the negative impact of same-sex parenting on children (an example of items is "A child adopted by a gay or lesbian couple will be the butt of jokes and rejection by his/her classmates"), and Normative Opposition (7 items), that involves negative attitudes toward same-sex parenting based on heterosexist beliefs (an example of items is "A boy raised by lesbian mothers will be an effeminate

child"). An exploratory factor analysis using oblique rotation was performed in order to examine the validity of the two-factor structure of the instrument. The scree-plot and robust fit estimates, R-CFI = .993, R-TLI = .985, R-RMSEA = .052, confirmed that the oblique 2-factor structure was the best solution. Both scales showed a good composite scale reliability (Individual Opposition: CR = .87; Normative Opposition: CR = .92).

Modern Homophobia Scale. A subscale of the Modern Homophobia Scale – Revised (MHS-R; Lingiardi et al., 2016; see also MHS by Raja & Stokes, 1998) was used only in study 1 to assess homonegativity. The original MHS-R provides scores on three dimensions: *deviance, personal discomfort,* and *institutional homophobia*. In the present study, we chose to only use the *deviance* dimension that evaluates the perception of homosexuality as deviant, pathological, and changeable. This scale includes two subscales to evaluate attitudes toward lesbian women (4 items) and attitudes toward gay men (8 items). Both subscales were assessed using a 5-point Likert-type scale, ranging from 1 (do not agree) to 5 (strongly agree). Greater total scores indicated greater homonegativity. Both subscales showed a good composite scale reliability (MHS/L-R; CR = .80; MHS/G-R; CR = .88).

Attitudes towards pathways to parenting for same-sex couples. Only in study 1, four single items were used to evaluate the attitudes toward the most common pathways to parenting for same-sex couples: adoption for lesbian couples, adoption for gay couples, artificial insemination or in vitro fertilization and surrogacy. Participants were asked to indicate if they were in favor or against to each of these four methods.

Statistical analysis

We conducted a series of exploratory factor analyses on data from the first study to identify the potential factors the BOSSP scales. Then we used a confirmatory factor analysis on data from the second study to confirm the factor structure. Using the data from the second study, we also examined the stationary and stability over time of the BOSSP scores through

an analysis of longitudinal invariance. Since the sample data in both studies were not normally distributed, we used the maximum likelihood estimation with robust standard errors (MLR) estimator in the exploratory analyses and in the confirmatory factor analyses. We chose the following traditional robust fit estimates to accept a solution as adequate fit for the sample data: robust comparative fit index (R-CFI) of .90 or greater, robust Tucker-Lewis index (T-TLI) of .80 or greater, and robust root-mean-error of approximation (R-RMSEA) value of .06 or lower.

Following the recommendations of Raykov (1997) and Brown (2006), we computed the composite scale reliability estimate for the measures of the studies. Consistent with recommendations in the literature, an estimate of .80 or greater was considered acceptable internal consistency reliability. Pearson's correlation was performed to test the convergent validity of the BOSSP scale. Finally, a series of multivariate analyses of covariance were used to test differences on BOSSP scores based on gender, and attitudes toward the most common pathways to parenting for same-sex couples. To perform the analyses, we used Mplus Version 7.4 and SPSS Version 22.

Results

For conceptual simplicity, the results are grouped according to the theoretical issues addressed rather than study by study.

Exploratory Factor Analysis

Using data from study 1, we performed an exploratory factor analysis on the 14 items of each BOSSP form in order to explore potential factors related to the attitudes toward same-sex parenting. Item retention was determined by the magnitude of factor loadings and cross-loadings. Specifically, we used the following criteria to eliminate an item from further consideration: item with a loading on a factor that was lower than .5; and item with high cross-loadings were removed. An item was retained if its primary loading was greater than .5

and second factor loadings was lower than .3. In each form, three items showing high loadings on both factors were eliminated. Specifically, the items 4, 12 and 17 in the two-father form and the items 4, 12 and 14 in the two-mother form were removed because of their high cross-loadings. We retained 11 of the 14 items for the two final forms of the instrument. The content of the items was identical for the two forms except for two items: The item 14 ("Counting on the support of the family of origin to raise their child") was only present in the two-father form while the item 17 ("Explaining to the child how to behave") was only present in the two-mother form.

The scree-plot, the parallel analysis and the robust fit estimates showed that the oblique 2-factor solution provided the best fit to the sample data in both measures of attitudes toward two-father families, R-CFI = .973, R-TLI = .957, R-RMSEA = .061, and two-mother families, R-CFI = .991, R-TLI = .986, R-RMSEA = .035. An oblique (i.e. quartimin) rotation was examined because emergent factors were expected to be correlated. The two factors of the two-father form accounted for 70.91% of the total variance, while those of the two-mother form accounted for 72.65%. Correlations between the factors were .67 for the two forms. The first factor (5 items) includes items related to the personal evaluation of same-sex couples on their ability to take care of their children and it was labeled "Parenting Skills" (PS). The second factor (6 items) involves making opinions about same-sex parenting based on beliefs on the potential challenges that same-sex couples may experience as parents obstructing the developmental pathways of their children. This factor was labeled "Parental Adjustment" (PA).

Confirmatory Factor Analysis, and Longitudinal Stability of the BOSSP

Data from study 2 were used to confirm the fit of the 2-factor structure of BOSSP scale. Moreover, additional support for the internal consistency reliability of the scale scores and for the stationary and stability of the instrument over time was provided.

First, we conducted a confirmatory factor analysis (CFA) to confirm the 2-factor oblique exploratory model to the sample data. We expected the 2-factor model to show better fit indices than an alternative one-factor model in which we constrained all items to load on a single factor. As expected, the 2-factor oblique model showed the best fit to the sample data in both the measures of attitudes towards two-father families, R-CFI = .972, R-TLI = .964, R-RMSEA = .055, and the attitudes toward two-mother families, R-CFI = .945, R-TLI = .929, R-RMSEA = .071. The one-factor model did not have adequate fit to the sample data (two-father parenting form: R-CFI = .862, R-TLI = .828, R-RMSEA = .121; two-mother parenting form: R-CFI = .781, R-TLI = .726, R-RMSEA = .140).

In order to test the stationary and stability over time of the BOSSP scores we run an analysis of longitudinal invariance. Specifically, we test the equivalence of the factor structure, factor loadings, factor variances and factor covariances over time for both forms of the BOSSP scale. We compared the fit of the models in the invariance routine computing chisquare differences. Since the items were not normally distributed, we run MLR as estimator. Thus, we used the Satorra-Bentler Scaled Chi-Square to better approximate chi-square differences under non-normality. There was evidence for the invariance of the overall structure (Model 1), factor loadings (Model 2), factor variances (Model 3) of both forms of the BOSSP across the two time-points (Table 2). The stability of the factor covariances (Model 4) was confirmed only for the two-father form.

Scale Reliability Estimates of the BOSSP

In study 1, results provided support for adequacy of the internal consistency reliability for the subscales of the two BOSSP forms (see Table 1). In study 2, the scale reliability estimates were also high: in the two-father form the composite reliability was .85 for the PA subscale and .84 for the PS subscale; in the two-mother form the composite reliability was .84 the for the PA subscale and .85 for the PS subscale. In study 2, it was also possible to

estimate the test-retest reliability over a 4-week period. In the two-mother form the reliability coefficients for the PA and the PS subscales were respectively .90 and .81; in the two-father form the reliability coefficients were .89 for the PA subscale and .87 for the PS subscale.

Convergent Validity of the BOSSP

Using data from study 1, we computed bivariate correlation analyses to examine the associations between the scores on the BOSSP subscales and the measures of theoretically related constructs like the beliefs on children's adjustment in same-sex families (SBCASSF) and the homonegative attitudes toward gay (MHS/G) and lesbian people (MHS/L). As shown in Table 3, high scores on the dimension of Individual Opposition and Normative Opposition of the SBCASSF scale and high homonegativity (MHS/LG) were significantly associated with low PA and the PS scores of the BOSSP scale in both two-mother and two-father forms.

Gender differences on BOSSP dimensions

One multivariate analysis of covariance was used on data from study 1 to examine the effects of gender on BOSSP scores separately for the two-mother and the two-father forms, using age as covariate. We found a multivariate significant effect of gender and age on two-mother form scores [Gender: Wilks' lambda = .95, F(2, 297) = 7.21, p = .001, $\eta^2 = 0.04$; Age: Wilks' lambda = .97, F(2, 297) = 4.95, p = .008, $\eta^2 = 0.03$]. The effect of gender was significant for both dimensions [PA: F(1, 298) = 14.36, p < .001, $\eta^2 = .046$; PS: F(1, 298) = 8.18, p = .005, $\eta^2 = .03$]. Women reported higher scores on PA (M = 25.37; SD = 4.54) and PS dimensions (M = 23.15; SD = 3.63) compared to men (respectively, M = 23.17; SD = 5.38 and M = 22.15; SD = 3.63). The covariate age was negatively associated to the PS scores, F(1, 298) = 9.43, p = .002, $\eta^2 = .03$, and was not significantly associated to PA scores, F(1, 298) = 2.61, p = .108, $\eta^2 = .01$.

Similar results were found for the two-father form [Gender: Wilks' lambda = .94, F(2, 297) = 8.71, p < .001, $\eta^2 = 0.05$; Age: Wilks' lambda = .97, F(2, 297) = 4.62, p = .011, $\eta^2 = 0.05$; Age: Wilks' lambda = .97, F(2, 297) = 4.62, p = .011, $\eta^2 = 0.05$; Age: Wilks' lambda = .97, F(2, 297) = 4.62, P(2, 29

0.03]. The effect of gender was significant for both dimensions [PA: F(1, 298) = 15.89, p < .001, $\eta^2 = .05$; PS: F(1, 298) = 11.41, p = .001, $\eta^2 = .04$], while age was negatively associated to the PS scores, F(1, 298) = 7.86, p = .005, $\eta^2 = .03$, but not to PA scores, F(1, 298) = .51, p = .476, $\eta^2 = .01$. Again, women reported higher scores on PA, M = 25.21; SD = 6.42, and PS dimensions, M = 22.96; SD = 3.11, compared to men (respectively, M = 22.39, SD = 5.52 and M = 21.58; SD = 3.84).

Pathways to Parenting and Attitudes Toward Same-Sex Parenting

Using data from study 1, two multivariate analyses of covariance (MANCOVA) were conducted to test for differences on the two dimensions of the BOSSP scale based on being in favor or against the different pathways to parenting for same-sex couples (e.g., adoption, artificial insemination or in vitro fertilization for lesbian couples and surrogacy for gay couples). Age and gender were used as covariates. Specifically, a two (against/ in favor of artificial insemination or in vitro fertilization for lesbian couples) by two (against/ in favor of adoption for lesbian couples) MANCOVA was conducted in order to examine differences on the dimensions of the two-mother form. A second two (against/ in favor of surrogacy for gay couples) by two (against/ in favor of adoption for gay couples) MANCOVA was conducted to investigate differences on the dimensions of the two-father form.

The MANCOVA performed on the two-father form revealed a significant main effect of opinions about adoption, Wilks's Λ = .95, F (2, 292) = 7.23, p = .001, η^2_p . = .05, and surrogacy, Wilks's Λ = .98, F (2, 292) = 7.69, p = .028, η^2_p . = .02, but not a significant interaction effect, Wilks's Λ = .99, F (2, 292) = 1.54, p = .216, η^2_p . = .01. The effects of the covariates were both significant [gender: Wilks's Λ = .97, F (2, 292) = 3.84, p = .023, η^2_p . = .03; age: Wilks's Λ = .97, F (2, 292) = 4.09, p = .018, η^2_p . = .03].

Follow-up ANCOVA analyses of covariance are displayed in Table 4. Results suggested that participants who were favorable to adoption for gay couples tended to report

more positive attitudes based on PS and PA dimensions (respectively, M = 22.99, SD = 2.94 and M = 25.84, SD = 5.55) compared to who were not favorable (PS: M = 21.94, SD = 4.09; PA: M = 20.03, SD = 5.25). Similarly, participants who were in favor of surrogacy showed higher PS and PA scores (respectively, M = 25.17, SD = 2.94 and M = 23.13, SD = 3.82) than those who were against (PS: M = 21.81, SD = 3.70; PA: M = 22.58, SD = 6.73).

The MANCOVA performed on the two-mother form revealed significant main effects of opinions about adoption, Wilks's $\Lambda = .84$, F(2, 292) = 28.11, p < .001, $\eta^2_p = .16$, and artificial insemination/ in vitro fertilization, Wilks's $\Lambda = .95$, F(2, 292) = 7.69, p = .001, $\eta^2_p = .05$, and a significant interaction effect, Wilks's $\Lambda = .98$, F(2, 292) = 3.18, p = .043, $\eta^2_p = .02$. The effect of age was statistically significant, Wilks's $\Lambda = .97$, F(2, 292) = 4.97, p = .008, $\eta^2_p = .03$, while the effect of gender was not, Wilks's $\Lambda = .99$, F(2, 292) = 1.94, p = .146, $\eta^2_p = .01$.

Follow-up ANCOVA analyses of covariance on PA scores (see Table 4) revealed significant effects of opinions about adoption and artificial insemination/ in vitro fertilization but not a significant interaction effect. Generally, participants who were favorable to the adoption, M = 25.96, SD = 3.70, and to the artificial insemination/in vitro fertilization options, M = 24.91, SD = 3.68, tended to report more positive attitudes on same-sex parents' adjustment compared to participants who were not favorable to both options (respectively, M = 21.58, SD = 5.28 and M = 22.64, SD = 5.51).

Follow-up analyses of covariance on the PS scores reported a significant interaction effect. Bonferroni-corrected pairwise comparisons showed no differences on PS dimension between participants who were in favor of only adoption, t(298) = .83, p = .407, or artificial insemination/in vitro fertilization, t(298) = .43, p = .669, and participants who were in favor of both methods. On the contrary, participants who were not in favor of both methods significantly differed on PS dimension from participants who were only in favor of adoption,

t(298) = .239, p = .017, or artificial insemination/in vitro fertilization, t(298) = 5.03, p < .001. Mean scores indicated that participants who were in favor of adoption, M = 23.60, SD = 2.14, or artificial insemination/in vitro fertilization, M = 22.91, SD = 2.21, or both methods, M = 23.23, SD = 2.83, reported higher scores on PS dimension compared to participants who were not favorable to both methods, M = 21.01, SD = 4.53.

Discussion

The purpose of the present studies was to explore the attitudes toward same-sex parent families, through the development and validation of a new measure, the Beliefs on Same-Sex Parenting (BOSSP) scale. Across two studies, we documented psychometric support for its factor structure, internal consistency, convergent validity of scores of the BOSSP subscales with theoretically related factors, and temporal stability for each factor.

Building upon the utility of previous measures of attitudes towards same-sex parenting, the current instrument seeks to provide a more targeted assessment of such attitudes. In previous studies, the majority of the evaluations of the prejudices on same-sex parenting have been mostly focused on opinions about children's wellbeing (Costa et al., 2014), have been dichotomously defined in terms of approval/disapproval (Massey, 2007) or have been operationalized as a construct not empirically distinct from homonegative prejudice (Herek, 1984; MacDonald et al., 1973). The BOSSP scale expands the evaluation of such prejudices by considering some relatively novel aspects that may be relevant in attitudes toward same-sex parenting. First, the BOSSP scale was specifically designed to explore the prejudice on same-sex couples' ability to parent. The scale is able to distinguish two types of beliefs underlying this prejudice: beliefs on basic parenting skills and beliefs on the potential impact that specific same-sex parents-related challenges may have on children's adjustment.

Basic parenting skills are intended as a necessary precondition for parents to guarantee an adequate child development and they concern the basic care-giving tasks (e.g., providing food, hygiene, emotional comfort). We argue that the BOSSP *Parenting Skills* dimension may be especially relevant for individuals who have internalized a traditional gendered perspective on family. People who associate parenting roles and competencies to biological sexes and consider having two parents of the opposite sex a prerequisite of parenting, may be more likely to question the basic parenting skills of same-sex couples.

The Parental Adjustment dimension is also indirectly related to concerns about the adjustment of children raised with same-sex parents. The items of this dimension are mostly linked to personal opinions about potential additional stressors and challenges that same-sex parent families may face in everyday life. More specifically, they refer to the negative impact of sexual minority stressors (Meyer, 2003) on LGB parents that can potentially affect children's adjustment. Beliefs on parental adjustment seemingly focus on the ability of parents to provide a safe social context for their children, to integrate themselves with other families, to guarantee a model of parenting that is culturally accepted. Notably, the exploratory factor analysis revealed that the two versions of the BOSSP scale differ for one item in the *Parental Adjustment* dimension. The item "Being supported by the birth family" was present only in the two-father version. Consistently with previous studies (Conley, 2011), one explanation for this difference may be that gay and bisexual men are more likely to experience rejections from parents compared to lesbian women. Thus, family rejection may be seen as a more relevant issue for two-father families compared to two-mother families. Conversely, the item "Explaining to the child how to behave" was only present in the two-mother form. This difference may be linked to the traditional conception of family which associates different gender-based skills to fathers and mothers. Fathers have historically been stereotyped as disciplinarian/authority figures, while mothers have long

been considered primary caregivers (Demos, 1982). Thus, disciplinary practices may be seen as a more relevant issue for two-mother families, since it does not fit with the stereotypical mothering.

Taken together, *Parenting Skills* and *Parental Adjustment* dimensions seem to significantly tap individuals' concerns about the adjustment of children who are raised by same-sex couples. This relation is confirmed by the hypothesized associations between the BOSSP subscales and the Normative Opposition and Individual Opposition dimensions of the Beliefs on Children's Adjustment in Same-Sex Families (SBCASSF) scale. However, unlike most previous measures on attitudes toward same-sex parent families, the BOSSP subscales seek to identify the rationale behind these concerns that is directly linked to the personal evaluation of same-sex couples' parenting. Essentially, the focus of this scale is more on parents' evaluations than children's ones.

Another relevant aspect of the BOSSP scale is that it seeks to identify a construct of attitudes towards same-sex parenting that is distinct from the construct of homonegativity. Several previous studies have evaluated attitudes toward same-sex families using a moralistic and ideological framework (Costa, et al., 2014, Herek, 1984). The BOSSP scale is composed of items that are not directly linked to homonegative prejudice or religious arguments and reflect opinions that may be common among people who self-identify as less conservative or less religious. However, we found that positive attitudes toward same-sex parents were negatively associates with homonegative attitudes. This may document that homonegative beliefs are still an important characteristic that provides a substantial distinction between individuals scoring negative or positive attitudes toward same-sex parents in terms of basic parenting skills and adjustment.

A third important aspect of the BOSSP scale is that it distinguishes attitudes toward two-father parenting from attitudes towards two-mother parenting. Several studies have

documented that people tend to show more negative attitudes towards gay men compared to lesbian mothers (Biblarz & Stacey, 2010; Gato & Fontaine, 2013). Furthermore, especially in conservative cultural contexts, motherhood is often considered central to the feminine identity and the salient symbol of the traditional family. Meanwhile, fatherhood is considered a peripheral aspect of the masculine identity, and parenthood is not so strongly expected from men (Schwartz & Rubel, 2005). Thus, taking beliefs on two-father parenting distinct from beliefs on two-mother parenting, may be significantly informative in addressing the prejudices behind these two types of attitudes. Further support for the validity of the instrument comes from our findings about gender difference on the BOSSP subscale scores. Specifically, in line with previous studies (Baiocco et al., 2013; Lingiardi et al., 2016; Petruccelli et al., 2015) and we found that women reported more positive attitudes towards same-sex parenting in terms of basic parenting skills and adjustment compared to men. As previous studies suggest (Lingiardi et al., 2016), women are typically more accepting of lesbian, gay and bisexual people than men and this greater openness may be reflected in the attitudes toward same-sex parenting.

Finally, our findings highlighted the association between negative beliefs on same-sex parenting and negative attitudes towards medical assisted-reproduction procedures practiced by same-sex couples to become parents. In our knowledge, there are no previous studies that have investigated this association. We found that people who have objections to the reproductive techniques (e.g., artificial insemination or surrogacy) show less favorable attitudes towards same-sex parents. These findings indicate that reproductive techniques that are further from the normative notions of children's conception, evoke greater ethical concerns that are not necessarily related to parents' sexual orientation. This is in line with previous studies (Shreffler, Johnson, & Scheuble, 2010) that highlighted the importance of genetic relatedness of parents and children in influencing the attitudes toward reproductive

techniques: ethical problems may become more serious for techniques that could result in a child who is not genetically related to both parents. All in all, these results indicate that the attitudes towards reproductive techniques may play a significant role in the prejudices about same-sex parenting.

Limitations and future directions

We note several limitations and directions for future research. Several limitations have to do with the nature of the sample. The use of a convenience sample would have differentially affected the prevalence of positive and negative attitudes. Moreover, the study was conducted in Italy: generalizing the results from this study to individuals living in other countries should be made with caution. Future research should continue to examine the generalizability of the BOSSP scale among different populations, age groups, and geographical locations. Specifically, beliefs and stereotypes on same-sex parenting could be studied in sexual minority people to better understand the associations between stereotypes and internalized sexual stigma and other forms of marginalization.

The BOSSP scale might be also used on some specific professional populations such as social workers, lawyers, and mental health professionals in order to examine the way in which stereotypes and prejudices permeate society and its institutions (Lingiardi, Nardelli, & Drescher, 2015; Lingiardi, Nardelli, & Tripodi, 2015). Future studies might consider additional constructs, such as gender ideology, religiosity, authoritarian personality traits, in relation to the dimensions of the BOSSP scale. Moreover, qualitative studies could offer a deeper understanding of individuals who report negative beliefs on same-sex parents in terms of parenting skills and adjustment.

Use of the BOSSP scale to assess attitudes toward same-sex parenting could be beneficial toward developing more comprehensive and effective training and intervention programs aimed to offer a realistic and objective perspective on families headed by same-sex

couples. We believe that the BOSSP scale could be a valuable aid in assessing training interventions to enhance people's abilities to identify their prejudices.

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Table 1.

Exploratory Factor Analyses Loadings, Fit Indices, and % Variance Accounted of BOSSP items

	Two-mo	other form	Two-father form		
Items	Parenting Skills	Parental Adjustment	Parenting Skills	Parental Adjustment	
3 Providing a safe social context	0.19	0.66	0.11	0.76	
7 Interacting with heterosexual parents	0.29	0.52	0.18	0.65	
8 Providing an adequate parental model	-0.02	0.90	0.06	0.82	
13 Disclosing to the child his/her origins	0.21	0.62	0.20	0.65	
14 Being supported by the birth family*	-	-	0.18	0.50	
Providing adequate female and male role models	-0.15	0.92	-0.17	0.95	
17 Explaining to the child how to behave**	0.27	0.60	-	-	
1 Taking care of child's diet	0.86	0.00	0.72	0.13	
2 Being caring parents within the family	0.91	-0.01	0.88	0.06	
5 Taking care of child's hygiene	0.94	-0.02	0.92	-0.05	
6 Showing parental warmth to the child	0.92	0.03	0.96	-0.03	
9 Cuddling the child	0.85	0.07	0.88	0.05	
% Variance accounted	41.70%	30.91%	38.60%	32.30%	
Composite Reliability	.90	.86	.88	.86	
Range	5-25	6-30	5-25	6-30	
R-CFI		991	.973		
R-TLI		986	.957		
R-RMSEA).)35	.061		

Note. *The item is included only in the two-father form; ** The item is included only in the two-mother form.

Table 2. Model Comparisons Testing the Longitudinal Measurement Invariance of the BOSSP scales

Model Comparisons -	Two-	father form	n	Two-mother form			
	$\Delta \chi^2$	Df	p	$\Delta \chi^2$	df	p	
Model 1 vs Model 2	15.27	9	.083	9.59	9	.384	
Model 2 vs Model 3	3.08	2	.214	1.41	2	.495	
Model 3 vs Model 4	1.75	1	.186	7.61	1	.005	

Note. Model 1= equality of the overall structure; Model 2 = Model 1 plus equality of the factor loadings; Model 3 = Model 2 plus equality of factor variances; Model 4 = Model 3 plus equality of factor covariances.

Table 3

Correlates of Attitudes toward Two-Father Parenting and Two-Mother Parenting

-								
	1.	2.	3.	4.	5.	6.	7.	8.
Parental Adjustment (two-father form)	1	.71	.81	.69	66	53	54	51
2. Parenting Skills (two-father form)		1	.57	.89	46	38	44	44
3. Parental Adjustment (two-mother form)			1	.61	55	43	46	45
4. Parenting Skills (two-mother form)				1	43	36	41	43
 Normative Opposition 					1	.69	.60	.62
6. Individual Opposition						1	.41	.47
7. MHS/L							1	.70
8. MHS/G								1

Note. All correlations are significant, p < .001.

Table 4

Between-group differences by attitudes towards pathways to parenting for same-sex couples on the Parenting Skills and Parental Adjustment scores

		Two-m	other form		Two-father form				
	Parenting Skills		Parental Adjustment		Parenting Skills		Parental Adjustment		
	F	${\eta_p}^2$	F	$\eta_p^{\ 2}$	F	η_p^2	F	η_p^2	
Adoption	10.06**	.03	51.47***	.15	2.71***	.01	14.41***	.05	
Repr.Techn.	2.78	.01	14.13***	.05	4.46***	.02	6.47***	.02	
Adoption X Repr. Tech.	6.24*	.02	3.79	.01	2.02	.00	2.69	.00	

Note. *p <.05; **p <.01; ***p <.001. The "Repr. Tech." variable is for "Reproductive Techniques". It refers to artificial insemination / In vitro fertilization for lesbian couples and surrogacy for gay couples.

Appendix A. Beliefs on Same-Sex Parenting (BOSSP) Scale

Two-Mother Form

Instructions: Please think about a two-mother family and, on a Likert scale from 1 (completely disagree) to 5 (completely agree), rate the extent to which two mothers would be able to:

- 1. Take care of a child's diet
- 2. Be caring parents within the family
- 3. Provide a safe social context
- 4. Disclose to the child his/her origins
- 5. Take care of the child's hygiene
- 6. Show parental warmth to the child
- 7. Interact with heterosexual parents
- 8. Provide an adequate parental model
- 9. Cuddle the child
- 10. Provide adequate female and male role models
- 11. Explain to the child how to behave

Two-Father Form

Instructions: Please think about a two-father family and, on a Likert scale from 1 (*totally disagree*) to 5 (*totally agree*), rate the extent to which two fathers would be able to:

- 1. Take care of the child's diet
- 2. Be caring parents within the family
- 3. Provide a safe social context

- 4. Disclose to the child his/her origins
- 5. Take care of the child's hygiene
- 6. Show parental warmth to the child
- 7. Interact with heterosexual parents
- 8. Provide an adequate parental model
- 9. Cuddle the child
- 10. Provide adequate female and male role models
- 11. Be supported by the birth family

Scoring

The scores on the Parenting Skills and Parental Adjustment subscales represent the sum of the loadings of items 1, 2, 5, 6, and 9, and items 3, 4, 7, 8, 10, and 11, respectively, with lower scores indicating more negative beliefs on parenting skills and parental adjustment.