

Sexual Orientation Differences Between Children of Same-Sex Parents and Children of Heterosexual Parents: A Brief Report Using a Meta-Analysis

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While it has been debated whether parental and children's sexual orientations are associated, no meta-analyses have yet been reported, using data with older children, comparison groups of heterosexual families, and larger samples. The apparent scientific consensus has been that parental and children's sexual

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orientations are unrelated. In contrast to previous research, here six studies are analyzed through three meta-analyses, with the result found that children from same-sex parent families are significantly more likely to be nonheterosexual (gay, lesbian, or bisexual; questioning; to engage in same-sex sexual relationships, or report same-sex sexual attraction) than are children from heterosexual parent families. Further research and more detailed social science theories are needed to explain possible pathways from parental sexual orientation to the development of sexual orientations in children.

Keywords: same-sex parents, sexual orientation of children, family theory, meta-analysis, gender of children

As described in far greater detail elsewhere (Schumm, 2018; Schumm & Crawford, 2019; Stacey and Biblarz, 2001) there has been considerable controversy regarding the possible association of the sexual orientation of children and of their parents. In particular, Stacey and Biblarz (2001) stated that “Virtually all of the published research claims to find no differences in the sexuality of children reared by lesbian parents and those raised by nongay parents. . . . Yet it is difficult to conceive of a credible theory of sexual development that would not expect the adult children of lesbian parents to display a somewhat higher incidence of homoerotic desire, behavior, or identity than children of heterosexual parents” (p. 163). However, they and others (see Schumm, 2013, p. 273) since have been severely criticized for and/or have been extremely cautious about maintaining such a possibility (Rosky, 2013), regardless of any theoretical merit.

For example, Ball (2003) went so far as to call Stacey and Biblarz’s conclusion not only essentially unfounded but “both useless and dangerous” (p. 703). Likewise, Ronner (2010) stated that “. . . There are people who believe, despite reliable studies to the contrary, that children raised by gay and lesbian parents are more likely to become homosexuals themselves” (pp. 22–23), which Ronner had included as one of many “delusional belief[s] about gay and lesbian parents” (p. 5). Furthermore, as many as 160 scholars and various authors have argued that lesbian, gay, and bisexual parents were not more likely to raise children who would grow

up to be nonheterosexuals themselves (Schumm, 2013, p. 267).

It would be fair to say that many scholars considered the idea that gay or lesbian parents would be more likely to raise children who would become lesbian, gay, or bisexual was a mere “myth.” Schumm (2020a, b) has provided a literature update on the issue, but no one has yet performed a meta-analysis on relevant data. Schumm and Crawford (2021) found evidence that research studies that found in favor of our alternative hypothesis (that LGB parents would tend to have children who would grow up to be LGB) tended to be cited significantly less often than studies that asserted they had found evidence in favor of the null hypothesis (that their children would not tend to grow up to be LGB), a tendency which has clouded the literature and obscured a great deal of research evidence (Schumm & Crawford, 2019).

Research Hypotheses

Our general hypothesis involved comparing the percentages of nonheterosexuality for children as a function of their parents’ sexual orientations. We expected that the children of same-sex parents would be more likely to report nonheterosexual attractions, questioning of their sexual orientation identity, nonheterosexual sexual behaviors, or nonheterosexual sexual orientation identities than would children of comparison groups with heterosexual parents. Thus, our main hypothesis was:

H₀. There will be no significant differences in children's reports of their own sexual orientation(s), in terms of sexual attraction, identity, behavior, and questioning of their sexual orientation, as a function of their parent's sexual orientations.

H₁. Children of nonheterosexual or same-sex parents will more often report higher levels of nonheterosexual sexual orientations, in terms of sexual attraction, identity, behavior, and questioning of their sexual orientation, compared to the children of heterosexual or mixed-gender parents.

Methods

Sample

We had located 59 studies that measured some aspect of children's sexual orientation, defined in terms of sexual attraction, sexual behavior, as described in detail elsewhere (Schumm, 2018; Schumm & Crawford, 2021, Appendix, pp. 27–28). To the best of our knowledge, those 59 studies represent all studies, published between 1978 and 2019, that assessed the sexual orientation, in some way, in terms of percentages, of the children of same-sex parents. Six studies also had comparison groups of the children of heterosexual parents. We did not include those without control groups (e.g., Easterbrook, 2019; Saffron, 1998). We did not include studies published more than 40 years ago (i.e., before 1980) or which primarily involved children under the age of 15 (e.g., Javaid, 1993). Studies that reported having studied similar variables but that did not report their results in terms of percentages were not included in our sample of studies (see also, Schumm, 2018, pp. 113–138). We also did not include studies if the number of

children of same-sex parents was less than 20 (e.g., Canning, 2005).

Thus, the studies included were Tasker & Golombok (1995, 1997); Sirota (1997); Kunin (1998); Zweig (1999); Murray and McClintock (2005), and Swank et al. (2013). Regnerus's (2012) research was not included, even though it would have favored our alternative hypothesis, because of numerous problems noted with it (Cheng & Powell, 2015) and because of variations in how parental sexual orientation was measured. Gartrell, Bos, and Koh's (2019) research would have been a logical inclusion except they did not explain in detail how they weighted the cases involving children of heterosexual parents; furthermore, depending on how one defined sexual orientation across sons and daughters of same-sex parents, the percentages ranged between 5.6% (Bos, Carone, Rothblum, Koh, & Gartrell, 2021) and approximately 70% (Gartrell, Bos, & Koh, 2019). Although Sirota (1997) was a dissertation, parts were later published as a refereed journal article (Sirota, 2009). Thus, two of our six studies have remained as unpublished dissertations (Kunin, 1998; Zweig, 1999).

Measures

Same-sex sexual orientation has been measured in terms of same-sex attraction or questioning of one's sexual orientation as a child, same-sex sexual behavior, and same-sex sexual identity. We followed that line of reasoning in the selection of measures in our six studies.

Selected Studies

Tasker and Golombok (1995, 1997) studied 25 children of lesbian mothers in England, of whom 9/25 (36%) reported same-sex attraction, 6/25 (24%) reported same-sex behavior, and 2/25 (8%) reported a lesbian identity, compared to 4, 0, and 0, respectively, for 20 children of heterosexual

parents. Notably, 14/25 (56.0%) had reported that their parent(s) had wanted them to become involved in LGB relationships or had no preference (Schumm, 2018, p. 128).

Sirota (1997, 2009) found that 23/67 (34.33%) of daughters of gay fathers identified as lesbian or bisexual while 30/43 (69.77%) of heterosexual daughters of gay fathers had questioned their sexual orientation previously. If one counted questioners and lesbian/bisexual daughters together, the total percentage would have been higher (53/67, 79.1%). The daughters of heterosexual fathers reported 2/67 (3.0%) reported being lesbian or bisexual while 14/60 (23.3%) of the heterosexual daughters reported having questioned their sexual orientation.

Kunin (1998) surveyed 21 sons and 26 daughters (ages 12 to 17) of lesbian mothers and found that 21/47 (44.68%) of them reported having questioned their sexual orientation and 4/47 reported being LGB with another six reporting “unknown.” Among the children of heterosexual parents, the comparable rates were 1/47 (2.1%) and 10/47 (21.3%).

Zweig (1999) found that 3/154 (1.9%) adult children of heterosexual parents were LGB compared to 20/80 (25.0%) of the children of LGB parents; in terms of not being exclusively heterosexual, the parallel rates were 3.9% (6/154) and 57.5% (46/80), respectively.

Murray and McClintock (2005; also see Ross & Dobinson, 2013) reported in their study that 43% (3/7) of the adult children of bisexual parents were LGB while 38% (11/29) of the adult children of gay or lesbian parents were LGB, compared to 0/63 children with heterosexual parents. Thus 14/36 (38.9%) of the children of LGB parents were LGB compared to none of the children of heterosexual parents.

Swank, Woodford, and Lim (2013) gathered data on the sexual orientation of

college students and their immediate family members. Of those with an immediate family member who was LGBT, 31% (52/168) were LGBT compared to 15.5% (289/1870) of those who did not have an immediate family member who was LGBT.

Analysis

Most meta-analyses present a PRISMA chart detailing how articles were excluded or included. In our case, we had already performed a literature review of studies that included children’s sexual orientation as a variable (Schumm, 2018; Schumm & Crawford, 2021). We used the Cochrane Collaboration’s free meta-analysis program Review Manager (Rev Man 5.4.1, 2020) for our calculations to compare the rates for the six studies. Because the studies measured different aspects of homosexuality (questioning, attraction, behavior, and identity) we performed three meta-analyses. First, we assessed differences in identity, then changed the data from Tasker and Golombok from identity to behavior and ran a second meta-analysis. Third, we used data on attraction or questioning from Tasker and Golombok, Sirota, and Kunin only to assess differences in attraction/questioning for those three studies.

Limitations

Because we used single items, no reliability or validity data were available. Our literature search did not yield any studies published after 2013 that met our eligibility criteria. The sample sizes in our studies ranged from small to fairly large. Some of the studies included younger children for whom sexual orientation might have been less relevant. Our data was limited to that from only six studies, but we excluded at least two studies that would probably have increased support even further for our alternative hypothesis. The free meta-analysis program we used did not calculate bias measures.

Results

Sexual Orientation Identity

Here we had data from 423 children of LGB parents or relatives and data from 2,221 children with heterosexual parents, across the six studies. The weights assigned to the six studies were 9.4%, 18.9%, 13.8%, 20.8%, 10.4%, and 26.6% for Tasker and Golombok, Sirota, Kunin, Zweig, Murray and McClintock, and Swank et al., respectively. We used a random effects model. The respective odds ratios were 0.23 (95% CI, 0.01 to 5.06), 0.06 (0.01 to 0.26), 0.23 (0.03 to 2.17), 0.06 (0.02 to 0.21), 0.01 (0.00 to 0.21), and 0.41 (0.29 to 0.58) where the odds ratios predicted lower odds for children of heterosexual parents reporting an LGB sexual orientation identity. The overall odds ratio was 0.12 (95% CI, 0.04 to 0.37) with an overall z test = 3.60 ($p = .0003$). In terms of heterogeneity, $\tau = 1.32$, with a chi-square ($df = 5$) of 18.79 ($p = .002$), and $I^2 = 73\%$, indicating some heterogeneity of results across the studies, a result that supports the use of a random effects model in meta-analyses. The odds ratio for predicting greater likelihood of the children of same-sex parents growing up to be lesbian, gay, or bisexual in terms of sexual orientation identity would be 8.3 (i.e., 1/.12), roughly equivalent to a Cohen's d of 4.57.

Sexual Orientation Behavior or Identity

Here we had the same data, except for using behavior as the outcome measure for Tasker and Golombok's research, as in the previous meta-analysis, from 423 children of LGB parents or relatives and data from 2,221 children with heterosexual parents, across the six studies. The weights assigned to the six studies were 10.2%, 18.8%, 13.8%, 20.6%, 10.5%, and 26.1% for Tasker and Golombok, Sirota, Kunin, Zweig, Murray and McClintock, and Swank et al., respectively. We used a random effects model. The

respective odds ratios were 0.07 (95% CI, 0.00 to 1.39), 0.06 (0.01 to 0.26), 0.23 (0.03 to 2.17), 0.06 (0.02 to 0.21), 0.01 (0.00 to 0.21), and 0.41 (0.29 to 0.58) where the odds ratios predicted lower odds for children of heterosexual parents reporting an LGB sexual orientation identity or behavior. The overall odds ratio was 0.10 (95% CI, 0.03 to 0.34) with an overall z test = 3.74 ($p = .0002$). In terms of heterogeneity, $\tau = 1.39$, with a chi-square ($df = 5$) of 19.67 ($p = .001$), and $I^2 = 75\%$, indicating some heterogeneity across the studies, again supporting the use of a random effects model. The equivalent odds ratio for predicting greater chances for children of same-sex parents growing up to engage in same-sex sexual behavior or report a lesbian, gay, or bisexual sexual orientation identity would be 10.0, roughly equivalent to a Cohen's d of 5.5.

Sexual Orientation Attraction or Questioning

With data from only three studies, the data set included data from 127 children of LGB parents or relatives and data from 115 children with heterosexual parents. The weights assigned to the three studies were 21.9%, 39.6%, and 38.5% for Tasker and Golombok, Sirota, and Kunin, respectively. We used a random effects model. The respective odds ratios were 0.44 (95% CI, 0.11 to 1.74), 0.13 (0.05 to 0.32), and 0.33 (0.14 to 0.83) where the odds ratios predicted lower odds for children of heterosexual parents reporting nonheterosexual sexual attraction or questioning of their sexual orientation. The overall odds ratio was 0.25 (95% CI, 0.12 to 0.51) with an overall z test = 3.78 ($p = .0002$). In terms of heterogeneity, $\tau = 0.14$, with a chi-square ($df = 2$) of 3.06 ($p = 0.22$), and $I^2 = 35\%$, indicating relatively low heterogeneity across the three studies. The equivalent odds ratio for predicting higher rates of same-sex sexual attraction/questioning for children of same-

sex parents would be 4.0, roughly equivalent to a Cohen's *d* of 2.2.

In none of the meta-analyses were the funnel plots unusual.

Discussion

In what we think are the first meta-analyses of data relating to a differential risk of the children of same-sex parents being more likely to report nonheterosexual sexual orientation identities, behavior, or attractions/questioning, compared to the children of heterosexual parents, we found strong evidence rejecting the null hypothesis of no differences, and in favor of the alternative hypothesis. The *z* tests for all of our three meta-analyses were significant ($p < .001$). The overall odds ratios ranged between 0.10 and 0.25, which would have been between 4 and 10 if reversed to indicate the increased odds of the children of LGB parents growing up to report LGB identity, behavior, attraction, or questioning. The Cohen's *d* measure of effect sizes for the three meta-analyses was more than large in all three tests (0.80 or more is considered "large"). Using a $z = 3.00$ as an average for the meta-analyses, the fail-safe number of studies supporting the null hypothesis required to overturn our findings would be approximately 114 (Rosenthal, 1979). It is doubtful that even 100 studies have been conducted in this area, suggesting it would take a considerable number of future studies that supported the null hypothesis, to overturn our findings here. If there has been a "myth" about the association between parental and children's sexual orientations, it would appear now that the myth was the null hypothesis about that association.

A point to consider for future research is that the effect size for attraction/questioning was lower than those for behavior and identity. That result may not fit the "born again" hypothesis, that genetic factors from

the parents predict same-sex attraction. Elsewhere, it has been noted that in the Tasker and Golombok (1995) study, some of the children of their lesbian mothers reported same-sex sexual behavior in the absence of same-sex sexual attraction (Schumm, 2018, pp. 121–122). Specifically, if there was same-sex attraction reported, the children of the lesbian mothers were significantly more likely to act on that attraction (6/9) compared to the children of heterosexual mothers (0/5), with a Cohen's *d* of 1.57 ($p < .05$). However, at least five of the children of the lesbian mothers were considering or had engaged in a same-sex sexual relationship even without experiencing same-sex sexual attraction. Such results suggest modeling of parents as a factor in children's behavioral decisions.

More work needs to be done in terms of research, seeking for mediating variables between same-sex parenting and child sexual orientation outcomes (Schumm, 2020a); likewise, more work needs to be done in theory development to anticipate which factors might be most likely to account for pathways from parental sexual orientation to children's sexual orientations (Schumm, 2020b). Other scholars might want to try to replicate our meta-analytic results with different samples, perhaps relaxing some of our choices for exclusions, or using different meta-analytic programs.

Conclusion

Despite over 90% of literature reviews between 2001 and 2017 concluding that the children of same-sex parents were not more likely to grow up to be lesbian, gay, or bisexual (Schumm & Crawford, 2019), our results differ and indicate that same-sex parents are more likely to have children who grow up to be nonheterosexual in their sexual attractions, questionings, behavior, and identity. The effect sizes found in our study were all well beyond the "large" effect size,

indicating that our results were not merely significant statistically but were also very substantial. This represents an important and substantial reversal of “common knowledge” among social scientists, even though more than twenty years ago Stacey and Biblarz (2001) argued that most social science theories would have predicted what we have reported here.

Our results would suggest that environmental factors, or perhaps genetic ones, are important predictors of adult sexual orientation, in contrast to the conventional idea that lesbian, gay, or bisexual persons are “born” that way. Even Gartrell et al. (2019) adopted environmental theory as one way to explain the high rates of nonheterosexuality they found among their sons and daughters of lesbian mothers. Some results suggest that parental modeling may influence children’s sexual behaviors, above and beyond any degree of sexual orientation attraction. One might wonder how long it will take to turn this ship of science around—literature reviews in recent years have continued to argue in favor of the no difference hypothesis on this issue in spite of increasing evidence to the contrary (see Schumm, 2020a, b for citations).

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