

School Progress Among Children of Same-Sex Couples

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Abstract This study uses logit regressions on a pooled sample of children from the 2012, 2013, and 2014 American Community Survey to perform a nationally representative analysis of school progress for a large sample of 4,430 children who reside with same-sex couples. Odds ratios from regressions that compare children between different-sex married couples and same-sex couples fail to show significant differences in normal school progress between households across a variety of sample compositions. Likewise, marginal effects from regressions that compare children with similar family dynamics between different-sex married couples and same-sex couples fail to predict significantly higher probabilities of grade retention for children of same-sex couples. Significantly lower grade retention rates are sometimes predicted for children of same-sex couples than for different-sex married couples, but these differences are sensitive to sample exclusions and do not indicate causal benefits to same-sex parenting.

Keywords Same-sex parents · Academic achievement · Family dynamics

Introduction

Do children raised by same-sex couples lag behind in school relative to children from heterosexual married couples? Although most nonrepresentative studies examining the effects of same-sex parenting have reached the consensus that it makes no difference whether children's parents are heterosexual or homosexual, more recent nationally representative studies have reached opposing conclusions. The purpose of this study is to revisit this topic and compare normal progress through school for children from both married and unmarried same-sex couples with children from married different-sex

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couples. This study improves previous logit regression estimates from large sample studies by using data from the 2012, 2013, and 2014 American Community Survey (ACS) that reduce measurement error of normal school progress and allow the comparison of children from intact families.

Logit regressions are used to analyze whether children from same-sex couples lag behind in school relative to children from heterosexual married couples. In addition to adopted children, the empirical analysis focuses on children from intact or stepparent households. Children are first analyzed as a full sample to see the differences in grade school performance that occur at an aggregate level between the children of same-sex couples and heterosexual married couples. Children who are not biologically related to a parent in the household are then sequentially excluded from analyses for robustness tests. Last, children with similar family dynamics are compared in subgroups between family structures. This methodology reveals that family dynamics have a meaningful effect on normal school progress, and mixed conclusions can be drawn depending on which children are compared between same-sex and different-sex couples.

Literature Review

Same-Sex Parenting and Grade Retention

A few theories may explain why normal progress through school would differ for children of same-sex parents than children of opposite-sex parents. Unlike heterosexual couples, same-sex couples must go outside the couple to conceive a child: they become parents only through adoption, through one partner's (generally prior) heterosexual relationship, donor insemination, or surrogate parenting (Stacey 2006). These caveats imply that it is much more difficult for same-sex couples to become parents than opposite-sex couples. If children residing with same-sex couples generally come from previous marriages, they must live through divorce or parental breakup, which can be traumatic for some children (Amato and Cheadle 2005). Such trauma could negatively affect school performance and result in grade retention.

Theories of psychological development have traditionally emphasized that mothers and fathers provide distinctive inputs for the healthy personal and social development of their children (Patterson 1992). As such, many theories predict negative outcomes for children raised in environments that do not provide both kinds of inputs (Nungesser 1980). From an evolutionary perspective, parents might have an incentive to invest more in their own biological children (Hamilton et al. 2007; Wilson 2002). The inability of both parents in a same-sex couple to be the biological parent of any one child (absent any prior sex change) may result in less time and resources being spent on their children, thereby prohibiting the child from making normal progress through school. Research by van Gelderen et al. (2012) found that stigmatization has a negative effect on the psychological adjustment of adolescents with same-sex parents. The social stigma associated with same-sex parenting likely causes the children from these families to endure harassment as they progress through school (Chrisp 2001). This harassment could negatively affect their progress through school: Brown and Taylor (2008) have shown that bullying negatively affects educational attainment, and Eriksen et al. (2014) have shown that bullying negatively affects GPA.

Differences or No Differences Found in Prior Research

Earlier studies of the psychosocial development of children raised by lesbians and gay men have found that these children are normal and well-adjusted (Chan et al. 1998a, b; Flaks et al. 1995; Golombok et al. 2003). Indeed, the 2005 American Psychological Association (APA) Brief “Lesbian and Gay Parenting” asserted that not a single study has found significant disadvantages for the children of lesbian and gay parents relative to children of heterosexual parents (Patterson 2005). However, a survey by Marks (2012) critiqued this earlier research on several grounds. Of the 59 studies cited in the APA Brief, 77 % are based on small, nonrepresentative, convenience samples of fewer than 100 participants, and most focused almost exclusively on white, well-educated, and middle-class lesbian parents. Furthermore, only 33 studies have included heterosexual comparison groups, and at least 13 of those used single mothers as opposed to intact marriage-based families. The 2005 APA Brief also deemphasized studies that contradicted its unanimous consensus. For example, Sarantakos found that children of heterosexual married couples are more likely to do well at school in academic and social terms than children of cohabiting and same-sex couples (1996), and children of homosexual parents reported deviance in higher proportions than children of heterosexual couples (2000).

More recent studies using representative data have revealed differences in outcomes between children of same-sex and different-sex couples. Regnerus (2012a, b) used nationally representative data on a smaller sample of young adults who lived at some point during their childhood with a paternal father that had a same-sex relationship and also found statistically significant differences in outcomes, many of which are considered suboptimal. However, these studies by Regnerus (2012a, b) have been heavily criticized on many grounds, and his results are highly fragile to potential measurement error and other methodological choices (Cheng and Powell 2015). Sullins (2015) found that emotional problems are more than twice as prevalent for children with same-sex parents than for children with opposite-sex parents. Using data from the Early Childhood Longitudinal Study, Potter (2012) found that children in families with same-sex parents scored lower in math assessment scores than their peers biologically related to both of their married parents, but the difference was not significant net of family transitions. Last, studies of large, representative samples of same-sex parents found lower odds of normal school progress and graduation rates for the children of same-sex couples (Allen 2013; Allen et al. 2013, 2014).

A review of the literature reveals that most studies conducted on same-sex parenting used small samples gathered through means that introduce various levels of bias.¹ Only a few studies have used probability samples that allow for generalizable results, but even some of these are constructed from a hybrid of probability sampling and

¹ These practices include recruiting individuals from sperm bank data sources or other types of reproduction technology providers (Bos and Van Balen 2008; Bos et al. 2007; Brewaeyts et al. 1997; Chan et al. 1998a, b), internet surveys (Bos 2010; Lehmillier 2010; Power et al. 2010), LGBT events, bookstore and newspaper advertisements, word of mouth, networking, and youth groups (Bailey et al. 1995; Dundas and Kaufman 2000; Fairtlough 2008; Flaks et al. 1995; Fulcher et al. 2008; Goldberg 2007; Lehmillier 2010; Oswald et al. 2008; Wright and Pery 2006).

convenience sampling (Golombok et al. 2003; Perry et al. 2004).² The nonrepresentative studies have tended to use very small sample sizes of same-sex couples in the range of 30–60, and many of the studies using probability samples have low numbers of same-sex couples.³ Studies using such small samples generally lack the ability to generate power for statistical tests, thus creating a bias toward accepting a null hypothesis of no difference in child outcomes between same-sex and opposite-sex households. To date, only four studies have used random samples of same-sex parents that were larger than 500 and are comparable to this study (Allen 2013; Allen et al. 2013, 2014; Rosenfeld 2010). Although using large, nationally representative data may limit the quantity and precision of interesting outcome variables, they lessen the likelihood of Type II error and allow for generalizable results.

The first study to perform a large-sample, nationally representative test of outcomes for children raised by same-sex couples is by Rosenfeld (2010). In his study, heterosexual married couples are the family type whose children have the lowest rates of grade retention, but he attributed this mostly to higher socioeconomic status. Using the 2000 U.S. Census 5 % Public Use Microdata Sample, Rosenfeld claimed that the own children of same-sex couples are as likely to make normal progress through school as the own children of most other family structures because logit coefficients are not statistically significant. However, a follow-up study by Allen et al. (2013) replicated Rosenfeld's analysis and provided odds ratios that predict differences between heterosexual married and same-sex couples. Furthermore, Allen et al. (2013) revealed that Rosenfeld's results are statistically insignificant because of the sample restrictions that he implemented.

Aside from restricting the sample to the own children of the head of the household, Rosenfeld further restricted the sample such that parents and children had coresided for at least five years. Rosenfeld implemented the latter restriction to reduce bias due to family instability and to ensure children's tenure within their current family structure. However, this restriction reduced the sample size by more than one-half, and there is no guarantee that the children who moved residentially within the last five years also changed family structures. Allen et al. (2013) showed that the odds of making normal progress through school are 1.26 ($p < .01$) times larger for children from heterosexual married parents than those of same-sex parents when one includes and controls for the children whose parents failed to meet Rosenfeld's family mobility constraint.

Rosenfeld restricted the sample to own children because of the unobserved timing of grade retention. It is entirely possible that adopted and stepchildren of same-sex couples lag behind in school prior to entry into these family structures. The inclusion of these children could bias results and lead one to mistakenly attribute same-sex parenting with poor school performance. When adopted and stepchildren are dropped from the analysis altogether, the potential for omitted variable bias is eliminated but two key channels through which same-sex couples may have children are removed. Furthermore, many of the children who are not biologically related to the household head are biologically related to the partner of the

² These studies include Wainright et al. (2004), Wainright and Patterson (2006, 2008), Fedewa and Clark (2009), Rosenfeld (2010), Regnerus (2012a, b), Allen et al. (2013, 2014), Allen (2013), and Bos et al. (2016a, b).

³ The three studies conducted on the same data set by Wainright and Patterson were able to identify only 6 gay and 44 lesbian households, Fedewa and Clark (2009) identified 35 same-sex families, Bos et al. (2016a) identified 32 lesbian headed households, and Bos et al. (2016b) matched 95 lesbian couples households to opposite-sex households.

household head. Thus, many children characterized as own children are in the same stepchild status as those removed from the sample, so Rosenfeld (2010) restricted the sample only to one type of own child. Allen et al. (2013) instead restored the full sample and controlled for whether the children are biologically related to the head of the household, which increased the odds ratio to 1.295 ($p < .05$). By removing both restrictions and including the full sample of children, the odds ratio increased to 1.354 ($p < .01$).

Allen et al. (2014) revisited Rosenfeld's analysis to show the differences in normal progress through school that emerge when gender composition of same-sex households is taken into consideration. When Rosenfeld's restrictions are relaxed, the odds of a daughter in a same-sex household making normal progress through school are 0.824 ($p < .10$) times those for a daughter in a married opposite-sex household. Sons of same-sex couples fare even worse with a reported odds ratio of 0.683 ($p < .01$). Allen et al. (2014) also showed that aggregating gay and lesbian couples into same-sex households can mask divergent outcomes. When same-sex couples are split into separate categories of gay and lesbian couples, the odds of children in gay and lesbian households making normal progress through school are, respectively, 69.8 % ($p < .01$) and 76.9 % ($p < .01$) of those from opposite-sex married households. Furthermore, the odds of making normal school progress for boys of gay households are lower and significantly different from girls in gay homes and boys in lesbian homes.

Allen et al. (2014) also found noteworthy results when reducing the measurement error in the dependent variable. The 2000 census data aggregate grade attending into grades 1–4 and grades 5–8, which allowed Rosenfeld to identify only whether a student is overage in the fourth or eighth grades. For most children included in the sample, Rosenfeld has no information on their progress through school. Thus, their inclusion biases estimates downward and reduces the precision of the estimates. When restricting the sample to the children whose information is most precise and keeping Rosenfeld's other restrictions, Allen et al. (2014) found large and significant differences between the children of same-sex couples and opposite-sex married couples.⁴

Allen (2013) used data from the 2006 Canada Census 20 % restricted master file to perform the only other large-sample, nationally representative study to date. Some advantages of these data compared with U.S. Census data is that same-sex marriage has been legal in Canada since 2005, and same-sex couples in Canada have enjoyed all taxation and government benefits since 1997. However, Allen (2013) was unable to distinguish remarried couples from married couples. The inability to identify remarried couples introduces some measurement error given that currently married parents could have been previously divorced. Using high school graduation rates, Allen found that the odds of children with gay parents graduating high school are 0.69 ($p < .05$) times those from opposite-sex married homes. The conditional graduation rate odds ratio for children of lesbian households is lower at 0.60 but is not statistically significant. Note that Allen did not exclude families who had moved within the past five years but rather controlled for child mobility within the last year or five years. Allen (2013) also separated effects between males and females, finding that the particular gender mix of a same-sex household leads to dramatic differences in child graduation. Regardless of the parents' gender, the odds of graduating high school are much lower for girls of same-sex couples than girls

⁴ Ages 11–12 and 15–16 provide the most precise information to determine whether a child has actually been held back in school.

from opposite-sex married homes; within households of same-sex parents, however, sons appear to do better with fathers, and daughters appear to do better with mothers.

The data used in this study offer some advantages over the 2000 U.S. Census data that Rosenfeld (2010) and Allen et al. (2013, 2014) used. Previously, children could be identified as overage to be making normal school progress only in the fourth and eighth grades. With ACS data, this study can identify children in grades K–12 who are overage for their current grade and thus reduce measurement error. The ACS also allows for the identification of remarried parents and provides the year in which respondents were last married. These details reduce family type misclassification and allow the comparison of children conceived during the tenure of a same-sex relationship to the children of intact heterosexual married couples.

Data

Data come from the 2012, 2013, and 2014 ACS Microdata via IPUMS (Ruggles et al. 2015). I limit the sample to children identified as living either with a married same-sex or opposite-sex couple or with an unmarried same-sex or opposite-sex couple. I use a large cross section of 1,012,927 children for analysis. Same-sex married couples can be identified in the 2012 ACS, but the 2013 ACS is the first year to retain unedited sex and marital status for same-sex married couples.⁵ Same-sex marriages are identified by responses to questions about the relationship to householder and sex rather than self-identification. If the head of the household reports being married to a spouse of the same sex, the household is coded as a same-sex married couple. Same-sex married couples can still be identified in the data if neither respondent is the head of the household, but their marital status will be jointly recoded to married, spouse absent.⁶ Same-sex and opposite-sex unmarried, cohabiting couples are identified in a similar manner. If a head of household reports living with an unmarried partner of the same sex, the couple is identified as a same-sex unmarried, cohabiting couple.

The identification of children is mostly dependent on their relationship to the head of the household. Stepchildren, adopted children, and foster children are included in the analysis with the biological children of householders. All remaining related and unrelated children are excluded from the analysis, as are children who reside with two probable stepparents. Children whose parent reports as being married to an absent spouse are also excluded from the analysis, provided that they are not the children of a nonhouseholder, same-sex married couple. Of the 2,486 children residing with same-sex married couples, only 2,436 are used for regression analysis because of discrepancies between marriage dates.⁷ Another 1,202 children of same-sex married couples are excluded from robustness analyses because their parents reportedly married before same-sex marriage was legal and are likely a source of measurement error. This reduced sample of 1,234 children is still large enough to generate power for statistical tests. There are 1,994 children who reside with same-sex unmarried, cohabiting couples. In total, 4,430 children in the sample reside

⁵ These couples are identified by SSMC (QRELATE) variable in the 2013 and 2014 (2012) ACS.

⁶ Two nonhead of household respondents of the same sex who are married to an absent spouse are identified as a same-sex married couple if they were last married in the same year.

⁷ The last year in which the respondent and their spouse married did not match for 50 children of same-sex married couples.

with same-sex couples. The remaining 1,008,497 children reside with different-sex couples, but only 70,401 of these children reside with unmarried, cohabiting couples. This study does not include children who reside with single parents.

The data show no apparent correlation between same-sex married couples and states that allow legal same-sex marriages ($r = .0128$). Of the 1,234 children identified as living with a same-sex married couple, 711 reside in states that legally recognized same-sex marriage by the end of the year in which the respondents were surveyed. This likely means that same-sex couples who have legally married elsewhere report the marriage even if it is not recognized by their current state of residence.

Outcome of Interest

The key dependent variable is an indicator for making normal progress through school, measured by prior grade retention using age-grade retardation as a proxy. Although normal progress through school is the only child outcome available for this analysis, it is still an important outcome. Retention in the primary grades is a strong indicator of a lack of childhood readiness for school, and effective parenting is a crucial ingredient in school readiness (Brooks-Gunn and Markman 2005). Grade retention has also been shown to be positively correlated with dropping out of high school and negatively correlated with labor market earnings (Eide and Showalter 2001).

The dependent variable is constructed by using two variables capturing age and current grade attending. Students who are identified as overage to be making normal progress through school in their current grade are coded as 0, whereas the remaining students are coded as 1. For example, a 7-year-old in kindergarten is considered too old to be making normal progress through school and is coded as 0. Table 1 shows the cutoff age for each grade. Students who are at least the cutoff age for the corresponding grade and 21 years of age or younger are reported as not making normal progress through school.⁸ One limitation of this data set is that it cannot identify when grade retention occurs: it can identify only whether grade retention has occurred.

Methodology

Logit regressions are used to evaluate differences in normal school progress between the children of heterosexual married couples and those from less-traditional family structures. The key explanatory variables are identifiers for children who reside with married gay couples, married lesbian couples, unmarried gay couples, unmarried lesbian couples, and unmarried heterosexual couples. Children from heterosexual married couples are always used as the omitted comparison group. Controls for household socioeconomic factors consist of parental educational attainment, marital history, income, race, and head of household mobility. Controls for child characteristics include sex and whether the child is U.S.-born, has a disability, or differs in race from his parents. State, grade, year fixed effects, and controls for metropolitan status and private school attendance are included. Regressions that include more than one child type also use

⁸ For most states in this sample period, the maximum age limit to which free education must be offered is 21, thus the sample is restricted to students in school at this age limit. A few states have no set maximum age, some are lower at ages 19–20, and some let local education agencies determine their maximum age.

Table 1 Scheme used to code grade retention

Current Grade	Average Age at Grade	Cutoff Age
Kindergarten	5	7
1st Grade	6	8
2nd Grade	7	9
3rd Grade	8	10
4th Grade	9	11
5th Grade	10	12
6th Grade	11	13
7th Grade	12	14
8th Grade	13	15
9th Grade	14	16
10th Grade	15	17
11th Grade	16	18
12th Grade	17	19

Note: If students meet or exceed the cutoff age for their current grade, they are coded as not making normal school progress.

appropriate controls that identify adopted, foster, or stepchildren. Table 2 defines the variables used in the analysis. The observations are weighted at the household level, and the standard errors are clustered at the state level.

Logit regressions include either multiple types of children or focus solely on one type of children. All children in the sample are initially included in logit regressions with controls for adopted, foster, and stepchildren to analyze the differences in normal school progress at aggregate levels between children of heterosexual married couples and children with other family structures. However, same-sex couples in the sample are much more likely to have adopted, foster, or stepchildren, and these types of children experience grade retention more frequently than children from intact couples. For this reason, various exclusions are applied to assess whether composition of comparison groups influences results. Likewise, the biological children of intact families, stepchildren, and adopted children are separately compared between heterosexual married couples and same-sex couples.

This estimation procedure compares normal school progress between the children of heterosexual married couples and those from other family types and controls for individual and family characteristics, but any differences that emerge because of family association cannot be interpreted as causal. Little, if any, information is available within this data set to know when the children of same-sex couples enter into these family structures and whether grade retention occurred prior to entry. Furthermore, every child who resides with a same-sex couple is completely missing information for at least one biological parent. Therefore, the key explanatory variables are endogenous.

Sample Construction

Because same-sex married couples are not self-reported but instead are imputed by responses to interfamily relationships and sex, it is possible that a small percentage of

Table 2 Definitions of variables

Variable	Definition
Outcome Variable	
Normal school progress	1 if child is not overage for current grade attending
Family Type	
Gay, married	1 if married couple consists of two men
Lesbian, married	1 if married couple consists of two women
Heterosexual, unmarried	1 if unmarried residential partners are opposite sex
Gay, unmarried	1 if unmarried residential partners are both men
Lesbian, unmarried	1 if unmarried residential partners are both women
Parent's Current Marital Status	
Separated	1 if unmarried parent is separated
Divorced	1 if unmarried parent is divorced
Parents' Race	
Interracial	1 if parents are an interracial couple
Different race	1 if child's race differs from noninterracial parents
Control Variables	
Stepchild	1 if child resides with a probable stepparent
Adopted	1 if adopted child of the head of the household
Foster child	1 if foster child of the head of the household
Father has high school diploma	1 if father or head of same-sex household has a high school diploma
Father some college	1 if father or head of same-sex household attended college
Father graduate degree	1 if father or head of same-sex household has a graduate degree
Mother has high school diploma	1 if mother or nonhead of same-sex household has a high school diploma
Mother some college	1 if mother or nonhead of same-sex household attended college
Mother graduate degree	1 if mother or nonhead of same-sex household has a graduate degree
Family income	Sum of parents' pre-tax personal income
Female	1 if child is female
Moved	1 if householder moved into the current residence within the past five years
U.S.-born	1 if child was born in the United States or a U.S. territory
Disability	1 if child has a cognitive, an ambulatory, an independent living, a vision, or a hearing difficulty
Urban	1 if child resides in a central metropolitan area
Suburbs	1 if child resides outside a central metropolitan area
Private	1 if child attends a private school
Legal	1 if same-sex marriage is legal in a respondent's state by the end of the sample year
Favorable	1 if a respondent's state polls favorably or has legalized same-sex marriage by the end of the sample year
Liberal	1 if a respondent resides in one of the 25 least-conservative states

sex mismarks among different-sex married couples is vastly overstating the number of same-sex married couples. According to a Census Bureau working paper by Kreider and Lofquist (2014), roughly one-half of those reporting as same-sex married couples in the 2010 ACS are actually opposite-sex married couples who misreported on the sex question. Furthermore, the respondents of same-sex married couples whose sex does not match administrative records are more likely to be older, own their home free and clear, be foreign-born, and not speak English very well than those who do match. To address this issue, a robustness measure excludes children whose same-sex married parents report a pre-2004 marriage date, the year that same-sex marriage was first legalized anywhere in the United States. At best, these parents are same-sex couples who have misreported marital status or marriage dates, but they are more than likely opposite-sex married couples who misreported sex.

Unfortunately, marital status has been recoded for same-sex married couples in the 2012 ACS, so the year a respondent was last married is not available for couples if both partners have been married only once. Most same-sex couples in the 2012 ACS in which neither respondent has been previously married are foreign-born, do not speak English very well, and have suspiciously large numbers of biological children.⁹ Therefore, the children of same-sex married couples with missing information are excluded from robustness analyses if the householder does not speak English very well for one robustness measure. A second robustness measure excludes all children with missing information. These robustness measures exclude one-half the sample of same-sex married couples, which is comparable to findings by Kreider and Lofquist (2014) and seems to reasonably identify mischaracterization if the 2012, 2013, and 2014 survey years misreport same-sex married couples to a similar extent as the 2010 ACS. The sample of same-sex unmarried cohabiting couples is left intact.

Many children in the sample are biologically related to the householder but have a stepparent relationship with the spouse of the householder. This is especially likely for the children of same-sex couples given the impossibility of same-sex conception. Indeed, many children raised by same-sex couples come from previous heterosexual marriages and experience parental breakup that can have negative short-term repercussions for children, such as grade retention. To mitigate the potential for bias, the best comparison group between same-sex and different-sex couples comprises the children who were conceived during their biological parent's current marriage. Fortunately, the number of times and year in which a respondent was last married are available with this data set to aid the identification of these children. A child residing with a remarried parent could have been conceived through donor insemination after the biological parent's previous marriage ended and before the current marriage began. Thus, a child's current age must be compared with the duration of his biological parent's past marriage to precisely determine whether the nonhead spouse is a stepparent. Unfortunately, the ACS can identify only whether a respondent was divorced or widowed within the past sample year. This study assumes that a child born prior to the biological parent's second marriage was conceived during a previous marriage. Thus, the own children of householders are recoded as stepchildren if their age exceeds the duration of their remarried parent's current marriage.

⁹ Of the children who reside with same-sex married couples raising two children, 62.14 % are biologically related to the householder in the 2013 ACS compared with 88.73 % in the 2012 ACS.

Among the reduced sample of 1,234 children residing with same-sex married couples, only 443 children live with a biological parent who fails to meet both criteria. Thus, most children residing with same-sex married couples are adopted or likely have a stepfamily dynamic. Of these remaining 443 children, 115 were conceived during their parent's current marriage, presumably through a surrogate mother or donor insemination; 207 were conceived prior to the householder's current and only marriage; and 121 are missing information. Initially, all 443 children are considered to be the own children of intact gay and lesbian married households. Children with missing information are excluded for robustness tests, and the children conceived prior to their biological parent's current and only marriage are reclassified as stepchildren for a second robustness test. These robustness measures allow the comparison of the children objectively conceived during the tenure of their parents' same-sex relationship with comparable children from different-sex married couples.

Many of the children who are biologically related to a parent in a nonmarital same-sex relationship were also conceived during previous heterosexual relationships and exposed to parental breakup. Grouping these children with those conceived through alternative methods may bias regression estimates downward for same-sex unmarried couples. Unfortunately, little information is available in the ACS to determine whether a child residing with an unmarried couple was conceived during the course of the current relationship. For this reason, the biological children of same-sex unmarried couples are never reclassified as stepchildren. Instead, regressions control for whether the biological parent is separated or divorced. Because children who were conceived out of wedlock during a previous nonmarital heterosexual relationship cannot be distinguished from those conceived via alternative methods, marginal effects for the children of unmarried same-sex couples are likely biased downward.

Descriptive Statistics

Table 3 displays mean grade retention rates for every family structure. Children from heterosexual married couples appear to have the lowest rate of grade retention (4.43 %). Children who reside with gay married couples have a grade retention rate of 4.94 %, whereas the children who reside with lesbian married parents have a grade retention rate of 4.76 %. Among the children of unmarried couples, those who reside with

Table 3 Mean grade retention rates for each family structure

	Married Parents			Unmarried Parents		
	Heterosexual	Gay	Lesbian	Heterosexual	Gay	Lesbian
Grade Retention	4.43	4.94	4.76	6.09	6.13	4.90
Relationship to Head of Household						
Own	4.07	3.80	4.16	5.84	5.68	4.52
Stepchild	6.65	7.02	5.16	7.68	3.72	6.85
Adopted	8.25	7.78	4.21	6.53	6.61	4.29
Foster	12.89	4.17	34.68	7.93	32.38	11.16

Table 4 Sample sizes for each family structure

	Married Parents			Unmarried Parents		
	Heterosexual	Gay	Lesbian	Heterosexual	Gay	Lesbian
<i>N</i>	1,012,927	974	1,462	70,401	381	1,613
<i>N</i> Subgroups						
Own	828,909	686	831	60,636	246	1,069
Stepchild	78,289	125	391	8,507	33	235
Adopted	28,316	151	224	1,016	95	292
Foster	2,582	12	16	242	7	17

lesbian couples have the lowest grade retention rate (4.90 %), and those who reside with gay couples have the highest grade retention rate (6.13 %). Within the context of family dynamics, stepchildren and adopted children who reside with same-sex couples tend to have lower grade retention rates than those from heterosexual couples. Likewise, the mean grade retention rate is lower for the own children of gay married couples than the own children of heterosexual married couples.

Table 4 displays the sample sizes for each family structure. Most sample children reside with heterosexual married couples and are biologically related to the household. With only 381 children residing with unmarried gay couples, the statistical power of estimates for this subgroup could be relatively low. Despite a sufficiently large sample of children residing with married gay couples initially, 590 of these 974 children are probable cases of measurement error. Thus, the statistical power of estimates for the reduced sample of children residing with married gay couples is also relatively low. Last, more than twice as many children reside with lesbian couples as reside with gay couples.

Table 5 displays other first-order predictors of grade retention. Unsurprisingly, grade retention rates tend to decrease as parental income and educational attainment increase.¹⁰ The children of black same-sex married couples have remarkably lower rates of grade retention than the children of black heterosexual married couples. In contrast, the children of Hispanic same-sex couples seem to lag behind in school more frequently than the Hispanic children of heterosexual married couples.¹¹ Children whose race differs from that of their parents have the lowest rates of grade retention among gay unmarried couples. Last, males tend to be more likely to experience grade retention than females, although males appear to fare better with gay married parents than lesbian married parents.

Summary statistics are displayed in Table 6. Educational attainment is highest for married couples; on average, though, same-sex unmarried couples have much higher

¹⁰ For the educational attainment of same-sex married couples, there is always a father and mother link as opposed to two father or two mother links. The head of the household is always linked as the father of the child and the spouse is linked as the mother, regardless of any biological relation.

¹¹ Children are coded as Hispanic if they are of Hispanic origin and self-identified as other race, not elsewhere categorized (n.e.c.) in the detailed race variable. Different identification strategies were used, but none significantly altered regression results.

Table 5 Mean grade retention rates by family demographics

	Married Parents			Unmarried Parents		
	Heterosexual	Gay	Lesbian	Heterosexual	Gay	Lesbian
Parent's Income by Quintile						
Quintile 1	7.14	8.81	6.30	7.43	8.90	8.32
Quintile 2	5.31	7.85	6.47	5.72	9.18	2.74
Quintile 3	4.06	1.94	3.94	4.74	2.57	3.97
Quintile 4	3.14	4.16	4.22	3.97	2.44	5.16
Quintile 5	2.58	2.39	2.57	4.15	3.96	2.23
Parent's Education						
Less than high school diploma (father)	7.39	8.23	9.69	7.45	7.02	9.29
High school diploma (father)	5.37	4.81	5.41	6.29	6.40	7.51
College degree (father)	3.04	3.44	4.35	4.45	4.74	2.24
Less than high school diploma (mother)	8.05	4.50	11.73	8.31	9.45	13.04
High school diploma (mother)	5.70	5.29	3.94	6.09	10.33	7.67
College degree (mother)	2.98	3.63	4.01	4.38	2.26	2.40
Parents' Race						
White	4.30	5.48	5.03	5.77	6.11	4.88
Black	6.30	3.87	1.77	8.67	12.00	5.07
Asian	3.08	2.92	2.48	2.90	0.00	6.23
Hispanic	5.72	5.83	13.07	6.14	12.61	18.54
Interracial	3.93	3.85	3.50	5.09	0.00	3.43
Child's Race Differs From Parents'	5.14	5.83	4.02	5.65	1.54	5.51
Child's Gender						
Male	5.17	4.60	6.22	7.07	8.96	5.82
Female	3.65	5.40	3.43	5.05	2.75	3.83

Note: For gay and lesbian households, the "father" is the survey respondent who identifies as the householder.

educational attainment than heterosexual unmarried couples. Gay married couples have the highest median income, followed by heterosexual married couples. Married gay couples are more likely to be nonwhite more than are couples with other family structures. Same-sex couples are generally more likely to have adopted children, stepchildren, and foster children than opposite-sex couples, which is to be expected given the increased difficulty of same-sex couples becoming parents.¹² Same-sex married couples appear to have higher educational attainment and median incomes than unmarried same-sex couples.

¹² The percentage of adopted, foster, and stepchildren for unmarried same-sex couples is actually higher than reported given that many of these children have stepparent relationships with their biological parent's unmarried partner. Likewise, when misreported households are dropped from the analysis, roughly 60 % of the children residing with married same-sex couples are adopted, foster, or stepchildren.

Table 6 Summary statistics

	Married Parents			Unmarried Parents		
	Heterosexual	Gay	Lesbian	Heterosexual	Gay	Lesbian
Parent's Educational Attainment						
Father: Less than high school diploma (%)	16.29	12.52	13.23	35.47	17.62	11.63
Father: College degree (%)	44.15	50.61	52.20	14.28	39.69	41.28
Mother: Less than high school diploma (%)	13.95	15.13	13.75	28.91	13.70	11.55
Mother: College degree (%)	48.35	43.89	49.07	20.98	29.80	45.36
Median of Parental Income	80,000	84,000	75,000	43,000	64,700	62,500
Parents are Nonwhite	25.39	34.72	28.63	29.20	29.52	29.46
Child's Race Differs From Parents' Race	21.90	31.75	24.45	33.95	37.79	32.97
Percentage of Adopted, Foster, or Stepchildren	11.66	32.99	43.06	14.53	32.61	32.57
Percentage of Children With a Disability	4.11	5.04	7.61	6.52	8.21	8.07

Note: For gay and lesbian households, the “father” is the survey respondent who identifies as the householder.

Empirical Analysis

I present the empirical analysis in two main subsections. The first subsection assesses differences in normal school progress between the children of heterosexual married couples and same-sex couples. The second subsection more narrowly compares children between households to consider the influence of family dynamics on normal school progress. Full regression output for tables are available in [Online Resource 1](#).

Differences in Normal School Progress

Aggregate Comparisons

Table 7 displays odds ratios from logit regressions that analyze differences in normal school progress between the children of heterosexual married couples and nontraditional family structures. None of the odds ratios in Table 7 predict a statistically significant difference in normal school progress between the children of different-sex married couples and children of same-sex couples. The reduced sample excludes same-sex married households that are potentially misreported different-sex married couples—or at best, same-sex couples that misreported either marital status or marriage dates.

Interestingly, the odds ratios for children residing with lesbian couples, both married and unmarried, are greater than 1 for every sample comparison. This implies the odds of progressing through school at a normal rate are greater for children of lesbian couples than for children of heterosexual married couples, although none of these estimates are statistically significant. However, the odds of making normal progress through school for children who reside with married and unmarried gay couples are less

Table 7 Selected odds ratios of normal school progress

			Excluding Foster Children		Excluding Foster and Adopted Children	
	Full Sample	Reduced Sample	Full Sample	Reduced Sample	Full Sample	Reduced Sample
Household (ref. = heterosexual, married)						
Gay, married	0.9784 (0.1519)	0.9150 (0.2271)	0.9632 (0.1466)	0.8938 (0.2226)	1.0555 (0.1873)	1.0230 (0.3447)
Lesbian, married	1.0309 (0.1530)	1.3783 (0.3804)	1.0968 (0.1653)	1.3885 (0.3823)	1.0581 (0.1676)	1.5204 (0.4688)
Heterosexual, unmarried	0.9778 (0.0409)	0.9778 (0.0409)	0.9731 (0.0415)	0.9731 (0.0415)	0.9676 (0.0407)	0.9676 (0.0407)
Gay, unmarried	0.9077 (0.2143)	0.9078 (0.2143)	0.9717 (0.2406)	0.9720 (0.2405)	0.9095 (0.2579)	0.9093 (0.2578)
Lesbian, unmarried	1.1330 (0.1800)	1.1332 (0.1800)	1.1387 (0.1797)	1.1391 (0.1797)	1.0818 (0.1782)	1.0821 (0.1783)
<i>N</i>	1,012,927	1,011,725	1,010,051	1,008,855	979,957	978,828
Log-Likelihood	17,826,019	17,804,936	17,727,189	17,706,964	16,976,027	16,957,014
Children Included						
Own	Yes	Yes	Yes	Yes	Yes	Yes
Stepchildren	Yes	Yes	Yes	Yes	Yes	Yes
Adopted	Yes	Yes	Yes	Yes	No	No
Foster children	Yes	Yes	No	No	No	No

Notes: Data come from the 2012–2014 ACS via IPUMS. Observations are weighted, and standard errors are clustered at the state level. The reduced samples exclude households of same-sex couples that have misreported marital status, marriage dates, or sex.

than for those who reside with heterosexual married couples in most regressions, but these estimates are not statistically significant. These odds ratio patterns remain unchanged when foster children are excluded from analyses in columns 2–6 of Table 7. However, the odds of making normal progress through school become greater for children of gay married couples than for children of heterosexual married couples when the sample is restricted to children presumably residing with at least one biological parent, as shown in columns 5 and 6 ($p > .10$, nonsignificant (NS)). Using a large, representative sample of children residing with same-sex couples, I find that the odds ratios displayed in Table 7 never predict statistically significant differences in normal school progress between same-sex and different-sex households, and the children of potentially misclassified same-sex married couples do not appear to bias estimates significantly. However, the odds of making normal school progress are consistently higher for the children of lesbian couples than for those from heterosexual married couples. Likewise, the odds of making normal school progress are higher for children presumably residing with a biological father in a same-sex marriage than for those in a household with a heterosexual marriage.

The results from Table 7 differ notably from the results found by Allen et al. (2014). Whereas Allen et al. (2014) found statistically significant disadvantages for children residing with gay and lesbian couples, this study—using a similar methodology—cannot find any statistically significant differences between the children of different-sex married couples and those of same-sex couples. Disadvantages are predicted for the small sample of 381 children residing with unmarried, cohabiting gay couples relative to the children of heterosexual married couples, and the lack of precision may be attributed to the small sample size. Nevertheless, significant disadvantages are never predicted for the 974 children residing with married gay couples or the 3,075 children residing with lesbian couples.

A Closer Look at Family Dynamics

This subsection compares normal school progress for a single type of child between heterosexual married couples and the remaining family structures to closer examine the influence of family dynamics on grade retention. For ease of interpretation, in the remainder of this study, I present results as average marginal effects. An average marginal effect represents the discrete difference in average predicted probability for making normal school progress between the children from heterosexual married couples and children from the indicated family type. The biological children of householders are first analyzed because this is the largest and most reliably identified subgroup. Children whose presumably biological parent is the spouse of the stepparent householder are analyzed next, followed by adopted children of householders. Sample sizes for same-sex couples become fairly small in the latter subgroups, and the statistical power of these estimates is reduced accordingly.

Table 8 exclusively analyzes children who are biologically related to the householder and fails to show statistically significant disadvantages in normal school progress for the children of same-sex couples. The first column of Table 8 displays marginal effects for the full sample of children biologically related to the householder. Disadvantages in normal school progress are predicted only for the own children of unmarried gay couples and unmarried heterosexual couples at 0.78 and 0.14 percentage points, respectively (for both, $p > .10$, NS, full sample). In contrast, I find no difference in normal school progress between the children of married lesbian couples and those of married different-sex couples, and marginal effects for married gay couples and unmarried lesbian couples are weakly positive at 0.33 and 0.44 percentage points, respectively (for both, $p > .10$, NS, full sample). The second column displays the sensitivity of marginal effects for same-sex married couples to the inclusion of couples who misreported their marital status, marriage date, or sex. Interestingly, this reveals a 1.82 percentage point disadvantage for the own children of gay married couples but a 1.59 percentage point advantage for the own children of lesbian married couples (for both, $p > .10$, NS, reduced sample). Additional regressions test whether results are sensitive to the inclusion of same-sex married couples with missing information or omitted bias because of parental breakup.

Additional robustness measures fail to show significant disadvantages in normal school progress for the children of same-sex couples. The children of same-sex married couples with missing information for their parents' marital history are excluded in addition to those households who misreported sex, marital status, or marital history for

Table 8 Selected average marginal effects for making normal school progress

	Biological Children of Householders			
	Full Sample	Reduced Sample	Robust, Missing	Robust, Intact
Household (ref. = heterosexual, male)				
Gay, married	0.0033 (0.0070)	-0.0182 (0.0212)	0.0157 (0.0165)	0.0041 (0.0322)
Lesbian, married	0.0004 (0.0075)	0.0159 (0.0129)	0.0266** (0.0093)	— —
Heterosexual, unmarried	-0.0014 (0.0017)			-0.0052** (0.0017)
Gay, unmarried	-0.0078 (0.0131)			-0.0121 (0.0131)
Lesbian, unmarried	0.0044 (0.0056)			0.0007 (0.0055)
<i>N</i>	892,377	891,303	891,182	770,392
Log-Likelihood	14,805,170	14,789,243	14,785,322	11,509,186

Notes: Data come from the 2012–2014 ACS via IPUMS. Observations are weighted, and standard errors are clustered at the state level. The reduced samples exclude households of same-sex married couples that have misreported marital status, marriage dates, or sex. Column Robust, Missing further excludes households with missing marital information, and column Robust, Intact restricts the sample to children conceived during their biological parents' current marriage.

** $p < .01$

the third column of marginal effects in Table 8. Surprisingly, the negative marginal effect previously predicted for gay married couples is reversed in sign such that their children are 1.57 percentage points ($p > .10$, NS, robustness missing) less likely to lag behind in school than children from heterosexual married couples. Thus, the negative marginal effect previously predicted for children of gay married couples is driven by households with missing information. Likewise, this same robustness measure reveals a significant advantage for the children of lesbian married couples at 2.66 percentage points ($p < .01$, strongly significant, robustness missing).

The final column of Table 8 compares the children of intact households—those conceived during the tenure of their biological parent's current marriage—between different-sex and same-sex couples. The children of intact gay married couples are weakly predicted as more likely to make normal school progress than those from intact heterosexual married couples at 0.41 percentage points ($p > .10$, NS, robust intact). Similarly, none of the children of intact lesbian married couples are lagging behind in school. The children of unmarried couples are also compared with the children of intact heterosexual married couples, but many of the former children have experienced parental breakup. Nevertheless, normal school progress does not differ between the children of intact heterosexual married couples and the full sample of children residing with unmarried lesbian couples, including those born during previous heterosexual marriages ($p > .10$, NS, robust intact). The children of unmarried gay couples do appear to be disadvantaged with regard to normal school progress relative to children from

intact heterosexual married households, but the marginal effect is not measured with statistical significance ($p > .10$, NS, robust intact). The full sample of children residing with nonintact heterosexual unmarried couples are significantly less likely to lag behind in school than those from intact heterosexual married couples ($p < .01$, strongly significant, robust intact).

Table 9 compares stepchildren and adopted children across family structures. The stepchildren of householders are presumably related to the householder's spouse or unmarried partner, but column 3 also includes the biological children of same-sex married householders who likely have a stepparent relationship with their biological parent's spouse. Marginal effects for the full sample of stepchildren are displayed in the first column of Table 9, none of which are statistically significant. A slight advantage of 0.74 percentage points is predicted for the stepchildren of lesbian married couples ($p > .10$, NS, stepchildren, full sample), but most of the marginal effects for nontraditional family structures are practically 0. A sizable advantage in normal school progress is predicted for the stepchildren of unmarried gay couples, at 2.86 percentage points ($p > .10$, NS, stepchildren, full sample), but this marginal effect is statistically insignificant. The marginal effect for the stepchildren of married gay couples does become statistically significant at 3.11 percentage points ($p < .10$, statistically significant, stepchildren, reduced sample) when the households who misreported their marital status, marriage date, or sex are dropped. Similarly, the marginal effect for the stepchildren of married lesbian couples increases to 1.94 percentage points ($p > .10$, NS, stepchildren, reduced

Table 9 Selected average marginal effects for making normal school progress

	Stepchildren of Houesholders			Adopted Children of Householders	
	Full Sample	Reduced Sample	Reclassified	Full Sample	Reduced Sample
Household (ref. = heterosexual, married)					
Gay, married	-0.0011 (0.0206)	0.0311 [†] (0.0163)	0.0355** (0.0122)	-0.0276 (0.0306)	-0.0249 (0.0350)
Lesbian, married	0.0074 (0.0149)	0.0194 (0.0148)	0.0281** (0.0103)	0.0222 (0.0254)	0.0042 (0.0351)
Heterosexual, unmarried	0.0012 (0.0048)			0.0303** (0.0105)	
Gay, unmarried	0.0286 (0.0286)			0.0189 (0.0311)	
Lesbian, unmarried	-0.0021 (0.0230)			0.0313** (0.0118)	
<i>N</i>	87,580	87,525	87,732	30,094	30,027
Log-Likelihood	2,158,607	2,155,459	2,157,601	737,895	736,679

Notes: Data come from the 2012–2014 ACS via IPUMS. Observations are weighted, and standard errors are clustered at the state level. The reduced samples exclude households of same-sex married couples that have misreported marital status, marriage dates, or sex. Column Reclassified includes the children of same-sex married couples conceived before their biological parent's current marriage.

[†] $p < .10$; ** $p < .01$

sample), but this marginal effect remains insignificant. However, with the inclusion of children who are biologically related to the householder of a parent in a same-sex marriage that likely have a stepparent relationship with their parent's spouse, marginal effects for both lesbian and gay married couples become statistically significant. Indeed, the third column of Table 9 reveals stepchildren of gay and lesbian married couples are 3.55 ($p < .01$, strongly significant, stepchildren reclassified) and 2.81 ($p < .01$, strongly significant, stepchildren reclassified) percentage points, respectively, more likely to make normal school progress than the stepchildren of heterosexual married couples.

The last two columns of Table 9 display marginal effects for regressions comparing only adopted children across family structures. When the full sample of adopted children is analyzed, a large disadvantage is revealed for those residing with married gay couples, at 2.76 percentage points ($p > .10$, NS, adopted, full sample). Although this marginal effect is not measured with statistical precision, a 2.49 percentage point ($p > .10$, NS, adopted, reduced sample) disadvantage remains for the sample of married gay households that are least likely to have misreported their marital status, marriage date, or sex. In contrast, the adopted children of the remaining nontraditional family structures are less likely to lag behind in school than the adopted children of heterosexual married couples. The adopted children of unmarried gay couples, married lesbian couples, and unmarried lesbian couples are 1.89 ($p > .10$, NS, adopted, full sample), 2.22 ($p > .10$, NS, adopted, full sample) and 3.13 ($p < .01$, strongly significant, adopted, full sample) percentage points, respectively, more likely to make normal progress through school than the adopted children of heterosexual married couples. Likewise, the adopted children of unmarried heterosexual couples are 3.03 percentage points ($p < .01$, strongly significant, adopted, full sample) more likely to make normal progress through school than the children of heterosexual married couples.

It is notably more difficult for unmarried heterosexual and same-sex couples to adopt children than for heterosexual married couples. If only the most highly qualified unmarried heterosexual and same-sex couples are allowed to adopt children, this would explain the perceived advantages observed for the adopted children of these family structures. Marginal effects for the adopted children of same-sex married couples remain statistically insignificant when the households suspected of measurement error are restricted from regression analysis, as shown in the last column of Table 9.

When children with similar family dynamics across family structures are analyzed, some differences in normal school progress are observed between the children of heterosexual married couples and same-sex couples. As revealed in the previous subsection with aggregate comparisons, most differences in normal school progress are advantageous for the children of same-sex couples. Indeed, between the children of different-sex and same-sex married couples who reside with a probable stepparent, significant advantages in normal school progress are predicted for the children of same-sex married couples despite the relatively small sample. Yet, even among a sufficiently large subgroup of children biologically related to a lesbian householder, a disadvantage in normal school progress is never predicted. On the contrary, a significant advantage is predicted for those children whose biological mother is in a same-sex marriage and has not been previously married. Also, a significant disadvantage is never predicted for the biological children of unmarried lesbian households despite a large sample of 1,069

children, even when the base comparison group is the children of intact different-sex married couples. Similarly, 114 of the 115 children conceived during the tenure of a same-sex marriage are making normal progress through school. Statistically insignificant disadvantages are predicted for the children of unmarried gay couples, but these estimates are driven by the children of biologically related householders and are likely biased downward given that one-half of these householders are separated or divorced. On the contrary, marginal effects for the stepchildren and adopted children of unmarried gay couples predict statistically insignificant advantages for their children relative to those from heterosexual married couples.

Conclusions

Insofar as normal progress through school is a useful indicator of child development, this study validates the consensus that children of same-sex couples do not appear to be developmentally disadvantaged relative to children raised by married heterosexual couples. Whereas previous large, nationally representative sample studies have found significant disadvantages in normal school progress for children of same-sex couples, this study fails to find similar results with comparable methodological techniques and data. Odds ratios from large sample regressions never predict significant differences in normal school progress between the children of same-sex and different-sex couples. Likewise, marginal effects from regressions that compare children with similar family dynamics between different-sex married couples and same-sex couples generally fail to show significant differences between households. Furthermore, when marginal effects are statistically significant at conventional levels, they indicate advantageous outcomes for children of same-sex couples.

Although some differences in normal school progress are observed between the children of same-sex couples and heterosexual married couples, the method by which children are compared between households can lead to drastically different conclusions. As illustrated in previous work by Allen (2013) and Allen et al. (2014), the children of gay and lesbian couples should not be grouped for comparison because notable differences are observed between these family structures. This study further illustrates that grouping children with dissimilar family dynamics can hide noteworthy differences in normal school progress. For instance, odds ratios consistently predict disadvantageous outcomes for children of unmarried gay couples prior to family dynamic comparisons, yet comparing children with similar family dynamics reveals advantageous differences in normal school progress for the stepchildren and adopted children of unmarried gay couples relative to those of married heterosexual couples. Although these results are not statistically significant, they suggest aggregate differences in normal school progress between the children of different-sex married couples and unmarried gay couples are driven by the biological children of unmarried, gay householders. The inability to distinguish the children who have experienced parental breakup likely biases this estimate downward because the children born into married gay households are less likely to lag behind in school than their peers from heterosexual married couples. Generally, children of same-sex couples are as likely to lag behind in school as their peers with similar family dynamics from heterosexual married couples. However, the biological children of married lesbian householders, stepchildren of married gay and lesbian

couples, and adopted children of unmarried lesbian householders are significantly less likely to lag behind in school than their peers from different-sex married couples.

This study improves those by Rosenfeld (2010) and Allen et al. (2013, 2014), which also examined the normal school progress of children from nontraditional families, but it shares some of their limitations. This study successfully reduces the measurement error of normal school progress, but it cannot identify when grade retention occurs. This study also attempts to fairly compare children with similar family dynamics by using information on marital history unavailable to previous studies, but potential for misclassification remains. The children of parents in same-sex relationships can be reliably identified only by their relation to the head of the household; thus, it is possible that some children biologically related to a householder in a same-sex relationship have a stepparent relationship with the nonhead parent but are misclassified. This study can compare children from intact heterosexual married couples with children conceived during the tenure of same-sex marriages, but little information is available to distinguish the children of unmarried couples who were conceived during the tenure of the couple's relationship from those conceived during a previous relationship.

In conclusion, this study mostly contradicts Allen et al.'s (2013, 2014) findings of disadvantageous differences in normal school progress for children residing with same-sex rather than opposite-sex parents. Future studies would greatly benefit from sufficiently large longitudinal data sets that include self-identified child-rearing same-sex couples and detailed measures of academic progress and family transitions. Despite data limitations that likely bias estimates for same-sex couples downward, this study finds children of same-sex couples are generally progressing through school at a rate comparable to or better than children of heterosexual married couples.

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References

- Allen, D. W. (2013). High school graduation rates among children of same-sex households. *Review of Economics of the Household*, *11*, 635–658.
- Allen, D. W., Pakaluk, C., & Price, J. (2013). Nontraditional families and childhood progress through school: A comment on Rosenfeld. *Demography*, *50*, 955–961.
- Allen, D. W., Pakaluk, C., & Price, J. (2014). Normal progress through school: Further results. In A. Samuel (Ed.), *No differences? How children in same-sex households fare: Studies from social science* [Kindle version]. Princeton, NJ: Witherspoon Institute. Retrieved from Amazon.com
- Amato, P. R., & Cheadle, J. (2005). The long reach of divorce: Divorce and child well-being across three generations. *Journal of Marriage and Family*, *67*, 191–206.
- Bailey, J. M., Bobrow, D., Wolfe, M., & Mikach, S. (1995). Sexual orientation of adult sons of gay fathers. *Developmental Psychology*, *31*, 124–129.
- Bos, H. M. W. (2010). Planned gay father families in kinship arrangements. *Australia and New Zealand Journal of Family Therapy*, *31*, 356–371.
- Bos, H. M. W., Gartrell, N., Roeleveld, J., & Ledoux, G. (2016a). Civic competence of Dutch children in female same-sex parent families: A comparison with children of opposite-sex parents. *Youth & Society*, *48*, 628–648.
- Bos, H. M. W., Knox, J. R., van Rijn-van Gelderen, L., & Gartrell, N. K. (2016b). Same-sex and different-sex parent households and child health outcomes: Findings from the National Survey of Children's Health. *Journal of Developmental & Behavioral Pediatrics*, *37*, 179–187.

- Bos, H. M. W., & van Balen, F. (2008). Children in planned lesbian families: Stigmatisation, psychological adjustment and protective factors. *Culture, Health, and Sexuality*, *10*, 221–236.
- Bos, H. M. W., van Balen, F., & van den Boom, D. C. (2007). Child adjustment and parenting in planned lesbian-parent families. *American Journal of Orthopsychiatry*, *77*, 38–48.
- Brewaeys, A., Ponjaert, I., Van Hall, E. V., & Golombok, S. (1997). Donor insemination: Child development and family functioning in lesbian mother families. *Human Reproduction*, *12*, 1349–1135.
- Brooks-Gunn, J., & Markman, L. B. (2005). The contribution of parenting to ethnic and racial gaps in school readiness. *Future of Children*, *15*(1), 139–168.
- Brown, S., & Taylor, K. (2008). Bullying, education and earnings: Evidence from the National Child Development Study. *Economics of Education Review*, *27*, 387–401.
- Chan, R. W., Brooks, R. C., Raboy, B., & Patterson, C. J. (1998a). Division of labor among lesbian and heterosexual parents: Associations with children's adjustment. *Journal of Family Psychology*, *12*, 402–419.
- Chan, R. W., Raboy, B., & Patterson, C. J. (1998b). Psychosocial adjustment among children conceived via donor insemination by lesbian and heterosexual mothers. *Child Development*, *69*, 443–457.
- Cheng, S., & Powell, B. (2015). Measurement, methods, and divergent patterns: Reassessing the effects of same-sex parents. *Social Science Research*, *52*, 615–626.
- Chrisp, J. (2001). That four letter word—sons: Lesbian mothers and adolescent son. *Journal of Lesbian Studies*, *5*(1-2), 195–209.
- Dundas, S., & Kaufman, M. (2000). The Toronto Lesbian Family Study. *Journal of Homosexuality*, *40*(2), 65–79.
- Eide, E. R., & Showalter, M. H. (2001). The effect of grade retention on educational and labor market outcomes. *Economics of Education Review*, *20*, 563–576.
- Eriksen, T. L. M., Nielsen, H. S., & Simonsen, M. (2014). Bullying in elementary school. *Journal of Human Resources*, *49*, 840–871.
- Fairtlough, A. (2008). Growing up with a lesbian or gay parent: Young people's perspectives. *Health & Social Care in the Community*, *16*, 521–528.
- Fedewa, A. L., & Clark, T. P. (2009). Parent practices and home-school partnerships: A differential effect for children from same-sex couples? *Journal of GLBT Family Studies*, *5*, 312–339.
- Flaks, D. K., Ficher, I., Masterpasqua, F., & Joseph, G. (1995). Lesbians choosing motherhood: A comparative study of lesbian and heterosexual parents and their children. *Developmental Psychology*, *31*, 105–114.
- Fulcher, M., Sutfin, E. L., & Patterson, C. J. (2008). Individual differences in gender development: Associations with parental sexual orientation, attitudes, and division of labor. *Sex Roles*, *58*, 330–341.
- Goldberg, A. E. (2007). How does it make a difference? Perspectives of adults with lesbian, gay, and bisexual parents. *American Journal of Orthopsychiatry*, *77*, 550–562.
- Golombok, S., Perry, B., Burston, A., Murray, C., Mooney-Somers, J., Stevens, M., & Golding, J. (2003). Children with lesbian parents: A community study. *Developmental Psychology*, *39*, 20–33.
- Hamilton, L., Cheng, S., & Powell, B. (2007). Adoptive parents, adaptive parents: Evaluating the importance of biological ties for parental investment. *American Sociological Review*, *72*, 95–116.
- Kreider, R. M., & Lofquist, D. A. (2014). *Matching survey data with administrative records to evaluate reports of same-sex married couple households* (Census Working Paper No. SEHSD-WP2014-36). Washington, DC: U.S. Census Bureau.
- Lehmiller, J. J. (2010). Differences in relationship investments between gay and heterosexual men. *Personal Relationships*, *17*, 81–96.
- Marks, L. (2012). Same-sex parenting and children's outcomes: A closer examination of the American Psychological Association's brief on lesbian and gay parenting. *Social Science Research*, *41*, 735–751.
- Nungesser, L. G. (1980). Theoretical bases for research on the acquisition of social sex-roles by children of lesbian mothers. *Journal of Homosexuality*, *5*(3), 177–188.
- Oswald, R. F., Goldberg, A., Kuvvalanka, K., & Clausell, E. (2008). Structural and moral commitment among same-sex couples: Relationship duration, religiosity, and parental status. *Journal of Family Psychology*, *22*, 411–419.
- Patterson, C. J. (1992). Children of lesbian and gay parents. *Child Development*, *63*, 1025–1042.
- Patterson, C. J. (2005). Lesbian and gay parents and their children: Summary of research findings. In G.W. Harper (Ed.), *Lesbian and Gay Parenting* (pp. 5–22). Washington, DC: American Psychological Association Lesbian, Gay, and Bisexual Concerns Office.
- Perry, B., Burston, A., Stevens, M., Golding, J., Steele, H., & Golombok, S. (2004). Children's play narratives: What they tell us about lesbian-mother families. *American Journal of Orthopsychiatry*, *74*, 467–479.
- Potter, D. (2012). Same-sex parent families and children's academic achievement. *Journal of Marriage and Family*, *74*, 556–571.

- Power, J., Perlesz, A., Brown, R., Schofield, M., Pitts, M., McNair, R., & Bickerdike, A. (2010). Diversity, tradition and family: Australian same-sex attracted parents and their families. *Gay and Lesbian Issues and Psychology Review*, 6, 66–81.
- Regnerus, M. (2012a). How different are the adult children of parents who have same-sex relationships? Findings from the New Family Structures Study. *Social Science Research*, 41, 752–770.
- Regnerus, M. (2012b). Parental same-sex relationships, family instability, and subsequent life outcomes for adult children: Answering critics of the new family structures study with additional analyses. *Social Science Research*, 41, 1367–1377.
- Rosenfeld, M. J. (2010). Nontraditional families and childhood progress through school. *Demography*, 47, 755–775.
- Ruggles, S. J., Genadek, K., Goeken, R., Grover, J., & Sobek, M. (2015). *Integrated public use microdata series: Version 6.0* [Data set]. Minneapolis: University of Minnesota.
- Sarantakos, S. (1996). Children in three contexts: Family, education, and social development. *Children Australia*, 21(3), 23–31.
- Sarantakos, S. (2000). *Same-sex couples*. Sydney, Australia: Harvard Press.
- Stacey, J. (2006). Gay parenthood and the decline of paternity as we knew it. *Sexualities*, 9, 27–55.
- Sullins, D. P. (2015). Emotional problems among children with same-sex parents: Difference by definition. *British Journal of Education, Society & Behavioural Science*, 7, 99–120.
- van Gelderen, L., Gartrell, N., Bos, H. M. W., van Rooij, F. B., & Hermans, J. M. A. (2012). Stigmatization associated with growing up in a lesbian-parented family: What do adolescents experience and how do they deal with it? *Children and Youth Services Review*, 34, 999–1006.
- Wainright, J. L., & Patterson, C. J. (2006). Delinquency, victimization, and substance use among adolescents with female same-sex parents. *Journal of Family Psychology*, 20, 526–530.
- Wainright, J. L., & Patterson, C. J. (2008). Peer relations among adolescents with female same-sex parents. *Developmental Psychology*, 44, 117–126.
- Wainright, J. L., Russell, S. T., & Patterson, C. J. (2004). Psychosocial adjustment, school outcomes, and romantic relationships of adolescents with same sex parents. *Child Development*, 75, 1886–1898.
- Wilson, J. Q. (2002). *The marriage problem: How our culture has weakened families*. New York, NY: HarperCollins.
- Wright, E. R., & Perry, B. L. (2006). Sexual identity distress, social support, and the health of gay, lesbian, and bisexual youth. *Journal of Homosexuality*, 51(1), 81–110.