

In the Supreme Court of the United States

ST. MARY CATHOLIC PARISH IN LITTLETON, ET AL.,

Petitioners,

v.

LISA ROY, IN HER OFFICIAL CAPACITY AS EXECUTIVE DIRECTOR OF THE COLORADO
DEPARTMENT OF EARLY CHILDHOOD, ET AL.,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE TENTH CIRCUIT

SUPPLEMENTAL JOINT APPENDIX

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Browse participating UPK Colorado providers

Search address, city or zip code ▼

Locations near you

Method of transportation ▼

Driving

Children ▼

Add children

The Department of Early Childhood's Universal Preschool (UPK) Colorado program allows families to choose the right setting for their child from a pool of licensed and registered community-based, school-based, and home-based providers.

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EXHIBIT

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COLORADO Department of Early Childhood

80110

Driving

1 child

English

Distance Program types More filters

Submit an application for UPK Colorado for the 2023-2024 school year

The Department of Early Childhood's Universal Preschool (UPK) Colorado program allows families to choose the right setting for their child, whether it is in a licensed community-based, school-based or home-based preschool setting. Families of children in the year before they are eligible for kindergarten, and qualifying 3 year olds, are able to apply for UPK Colorado for the 2023-24 school year beginning on January 17, 2023.

Submit an application

Rising Star Early Learning Center

3400 S Federal Blvd # D, Sheridan, 80110, 0.9 miles away

Monday - Friday: 6:30 AM - 6:00 PM

Financial assistance options available

Please note:

This is a provider that prioritizes placement for the children of their employees. This is a Head Start grantee and families may need to meet additional factors to enroll.

View more information

Stepping Stones Academy & Family Center

451 Englewood Pkwy Ste A & B, Englewood, 80110, 1.2 miles away

Monday - Friday: 6:30 AM - 6:00 PM

Financial assistance options available

Please note:

This is a provider that prioritizes placement for the children of their employees.

View more information

Englewood Early Childhood Education At Maddox--for 4 Year Old Applications

Englewood Early Childhood Education

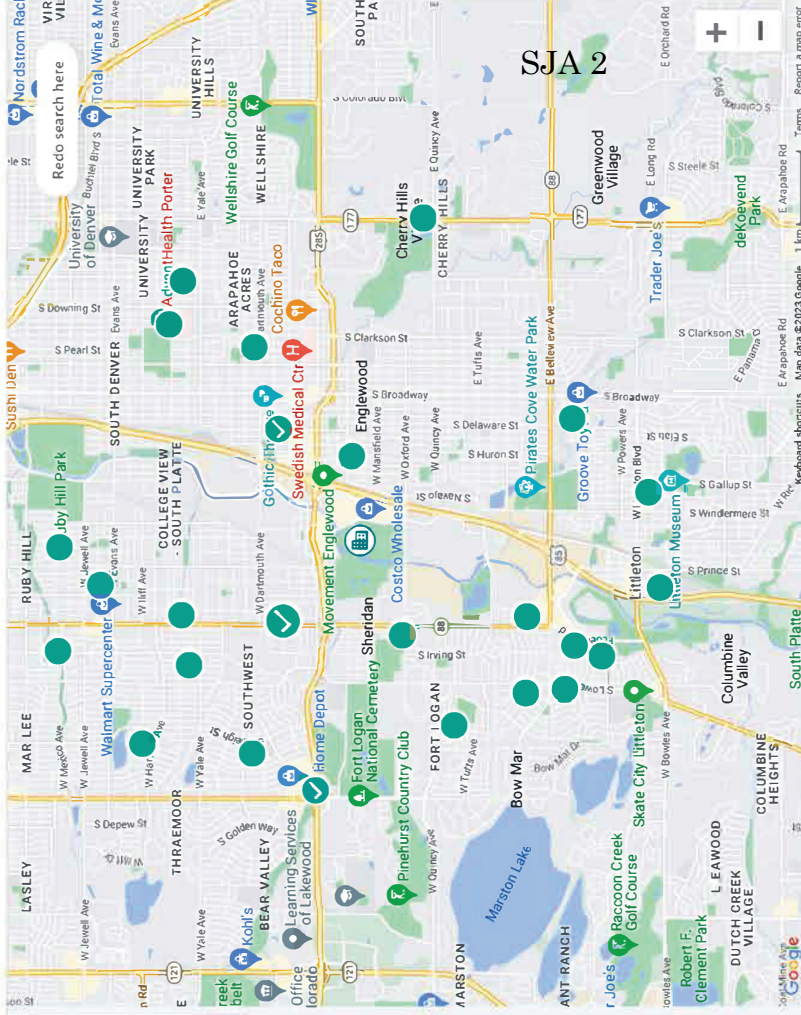
3838 S Huron Street, Englewood, 80110, 0.7 miles away

Monday - Friday: 7:00 AM - 5:00 PM

Financial assistance options available

Please note:

This is a school district provider and will require families to live in the school district or boundary AND/OR the provider supports



children with Individualized Education Program (IEP). This is a Head Start grantee and families may need to meet additional factors to enroll.

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Sheridan Early Childhood Center



Sheridan Early Childhood Center Preschool

4107 S Federal Blvd, Sheridan, 80110, 0.9 miles away

Monday - Friday: 7:30 AM - 4:30 PM, Saturday - Sunday: 7:00 AM - 6:00 PM

Financial assistance options available

Please note:

This is a school district provider and will require families to live in the school district or boundary AND/OR the provider supports children with Individualized Education Program (IEP). This is a Head Start grantee and families may need to meet additional factors to enroll.

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JumpStart Ela Of Englewood



5050 S Federal Blvd, Unit 30, Englewood, 80110, 1.6 miles away

Hours not available

[View more information](#)



South West YMCA



5181 W Kenyon Ave, Denver, 80236, 2.2 miles away

Monday - Friday: 7:00 AM - 5:00 PM

Financial assistance options available

[View more information](#)



Dps College View Elementary



Dps Ece College View Elementary

2675 S Decatur St, Denver, 80219, 1.7 miles away

Monday - Friday: 7:30 AM - 2:30 PM

Financial assistance options available

Please note:

This is an immersive or dual language provider and children may need to be screened to participate in the program. This is a school district provider and will require families to live in the school district or boundary AND/OR the provider supports children with Individualized Education Program (IEP). This is a Head Start grantee and families may need to meet additional factors to enroll. This is


a provider that prioritizes placement for the children of their employees.


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Dps Gust Elementary School

Dps Ece Gust Elementary School

3440 W Yale Ave, Denver, 80219, 1.8 miles away

 Monday - Friday: 7:45 AM - 2:15 PM

 Financial assistance options available

 **Please note:**


This is an immersive or dual language provider and children may need to be screened to participate in the program. This is a school district provider and will require families to live in the school district or boundary AND/OR the provider supports children with Individualized Education Program (IEP). This is a Head Start grantee and families may need to meet additional factors to enroll. This is a provider that prioritizes placement for the children of their employees.


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Dps Kaiser Elementary School

Dps Ece Kaiser Elementary School

4500 S Quitman St, Denver, 80236, 1.8 miles away

 Monday - Friday: 8:00 AM - 3:15 PM

 Financial assistance options available

 **Please note:**


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St James Preschool

St. James Preschool

3601 W Belleview Ave, Littleton, 80123, 1.9 miles away

 Monday - Friday: 9:30 AM - 1:30 PM

 Financial assistance options available

 **Please note:**

This provider may require families to be a part of their congregation.

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Thrive Preschool

Thrive Englewood



3165 S Washington St, Englewood, 80113, 1.9 miles away

Hours not available

Financial assistance options available

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Thrive Littleton

5472 S Federal Cir, Littleton, 80123, 2.1 miles away



Monday - Friday: 8:00 AM - 5:30 PM

Financial assistance options available

View more information



Littleton Preparatory Charter School Pre-k

5301 S Bannock St, Littleton, 80120, 2.1 miles away



Hours not available

Financial assistance options available

Please note:

This is a school district provider and will require families to live in the school district or boundary AND/OR the provider supports children with Individualized Education Program (IEP). This is a provider that prioritizes placement for the children of their employees.

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Dps Sabin Elementary School

Dps Ece Sabin Elementary School



3050 S Vrain, Denver, 80236, 2.1 miles away

Monday - Friday: 7:15 AM - 2:30 PM

Financial assistance options available

Please note:

This is an immersive or dual language provider and children may need to be screened to participate in the program. This is a school district provider and will require families to live in the school district or boundary AND/OR the provider supports children with Individualized Education Program (IEP). This is a Head Start grantee and families may need to meet additional factors to enroll. This is a provider that prioritizes placement for the children of their employees.

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Willows Child Learning Ctr @ Arapaho Hills



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5301 S Lowell Blvd, Littleton, 80123, 2.2 miles away

 Hours not available

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Sewall At Strive



Sewall At Ruben Valdez

2626 West Evans Avenue, Denver, 80219, 2.3 miles away

 Hours not available

 Financial assistance options available


[View more information](#)




Centennial Preschool



3306 W Berry Ave, Littleton, 80123, 2.3 miles away

 Monday: 8:00 AM - 1:00 PM, Wednesday: 9:00 AM - 2:00 PM, Friday: 8:00 AM - 1:00 PM

 **Please note:**

This is a school district provider and will require families to live in the school district or boundary AND/OR the provider supports children with Individualized Education Program (IEP).


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Great Escape Littleton United Meth



5894 S Datura St, Littleton, 80120, 2.5 miles away

 Hours not available

 Financial assistance options available

 **Please note:**

This provider may require families to be a part of their congregation. This is a provider that prioritizes placement for the children of their employees.


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Porter Children's Center



820 E Harvard Ave, Denver, 80210, 2.5 miles away

 Monday - Friday: 7:00 AM - 5:00 PM

 Financial assistance options available

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Dps Schmitt Elementary School



Dps Ece Schmitt Elementary School

1820 S Vallejo St, Denver, 80223, 2.6 miles away

Hours not available

Financial assistance options available

Please note:

This is an immersive or dual language provider and children may need to be screened to participate in the program. This is a school district provider and will require families to live in the school district or boundary AND/OR the provider supports children with Individualized Education Program (IEP). This is a Head Start grantee and families may need to meet additional factors to enroll. This is a provider that prioritizes placement for the children of their employees.

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Arap Comm College Child Care Center



5900 S Santa Fe Dr, Littleton, 80120, 2.6 miles away

Monday - Friday: 7:30 AM - 5:30 PM

Financial assistance options available

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Dps Doull Elementary School



Dps Ece Doull School

2520 S Utica St, Denver, 80219, 2.6 miles away

Monday - Friday: 7:30 AM - 2:45 PM

Financial assistance options available

Please note:

This is an immersive or dual language provider and children may need to be screened to participate in the program. This is a school district provider and will require families to live in the school district or boundary AND/OR the provider supports children with Individualized Education Program (IEP). This is a provider that prioritizes placement for the children of their employees.

[View more information](#)



Christ Lutheran Early Childhood Center



Christ Lutheran Preschool/kindergrtn

2695 S Franklin St, Denver, 80210, 2.7 miles away

Hours not available

Financial assistance options available

Please note:

This provider may require families to be a part of their congregation. This is a provider that prioritizes placement for the children of their employees.

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Dps Johnson Elementary School



Dps Ece Johnson Elementary School

1850 S Irving St, Denver, 80219, 2.8 miles away

Monday - Friday: 8:00 AM - 3:00 PM

Financial assistance options available

Please note:

This is an immersive or dual language provider and children may need to be screened to participate in the program. This is a school district provider and will require families to live in the school district or boundary AND/OR the provider supports children with Individualized Education Program (IEP). This is a Head Start grantee and families may need to meet additional factors to enroll. This is a provider that prioritizes placement for the children of their employees.

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Cherry Hills Village Preschool



2400 E Quincy Ave, Cherry Hills Village, 80113, 2.8 miles away

Monday - Thursday: 8:00 AM - 2:45 PM

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Preschool selection considerations and experiences of school mistreatment among lesbian, gay, and heterosexual adoptive parents

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Abstract

The current study is the first to investigate the school selection considerations and school-related experiences of sexual-minority parents with young children. The sample consisted of 210 parents in 105 couples, including 35 lesbian couples, 30 gay male couples, and 40 heterosexual couples, all of whom had adopted a child three years earlier. We found that parents with less income were more likely to consider cost in choosing a preschool, and parents with less education were more likely to consider location. More educated parents tended to emphasize racial diversity and the presence of adoptive families, and, among sexual-minority parents, the presence of other lesbian/gay parents. Sexual-minority parents were more likely to consider racial diversity than heterosexual parents. In reporting on their experiences with schools, heterosexual parents were more likely to perceive mistreatment due to their adoptive status than sexual-minority parents, and sexual-minority parents living in less gay-friendly communities were more likely to perceive mistreatment due to their sexual orientation than sexual-minority parents living in more gay-friendly communities. Our findings have implications for early childhood educators and administrators seeking to create an inclusive learning community for all types of families.

Keywords

Adoption; Early childhood; Gay; Lesbian; Preschool; School

1. Introduction

Despite advances in securing equal rights for sexual minorities and their families, sexual-minority (i.e., lesbian, gay, and bisexual; LGB) parents and their children encounter explicit and implicit forms of marginalization, exclusion, and stigma embedded in various societal institutions, such as the legal system and the schools (Byard, Kosciw, & Bartkiewicz, 2013; Goldberg, 2010). Within the school context, sexual-minority parent families may encounter teachers, school staff, and other parents who possess ambivalent or unsupportive attitudes toward families like their own (Gartrell et al., 2000). Such attitudes may manifest in either lack of acknowledgment or explicit stigmatization of children with sexual-minority parents.

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On a more subtle level, marginalization of these families may be embedded in the curriculum (e.g., by focusing entirely on the experiences of heterosexual people and families) and school paperwork (e.g., by failing to allow for representation of diverse family forms; Byard et al., 2013). Sexual-minority parent families who are “different” in additional ways, beyond parents’ sexual orientation, may also be vulnerable to bias and exclusion in school settings. Many sexual-minority parent families are adoptive and/or multiracial (Gates, Badgett, Macomber, & Chambers, 2007), introducing other dimensions of difference that may meet challenges in the school setting.

Little research has examined sexual-minority parents’ experiences in school settings. The little research that exists has focused primarily on their experiences in elementary school settings (Kosciw & Diaz, 2008), as opposed to their experiences in early childhood settings, where they may have more contact with teachers and staff (Beveridge, 2005), and thus may be more attuned to insensitivities directed at them and/or their child(ren). Indeed, we know little about the family–school interface of sexual-minority parent families with young children, including their school selection process and potential experiences of exclusion and mistreatment within their children’s schools. Likewise, we know little about the school experiences of sexual-minority parents who have adopted their children, and how such experiences may be shaped by adoption- or race-related factors. The current exploratory study examines the experiences of lesbian, gay, and heterosexual adoptive parents of preschool-age children with respect to their (a) school-related selection considerations; and (b) perceived experiences of mistreatment at school.

1.1. School decision-making and selection in parents of preschool-age children

Research on the school-related concerns of sexual-minority parents of school-age children suggests that parents are often aware of the potential for homophobic bullying at school (Gartrell et al., 2000). Several studies further suggest that some sexual-minority parents purposefully seek out progressive and diverse schools and communities in an effort to decrease the stigma to which their children are exposed (Casper & Schultz, 1999; Kosciw & Diaz, 2008; Mercier & Harold, 2003). Such efforts may be particularly pronounced among sexual-minority parents of children of color (Kosciw & Diaz, 2008). Parents who adopt children of color face the possibility that their children might be mistreated (i.e., confront stereotypes and ignorance) on the basis of their race; in turn, White sexual-minority parents of children of color recognize that their children might be mistreated on the basis of both their race and family structure (Goldberg, 2009). White parents who adopt children of color also confront the possibility that the multiracial makeup of their families – the fact that children look “different” from them – may render their children vulnerable to intrusive questions about adoption (e.g., “where are you from?”; “who are your ‘real’ parents?”; Vaschenko, D’Aleo, & Pinderhughes, 2012).

Parents of preschool-age children play a greater role in selecting their children’s school environments than parents of school-age children. Whereas most children in elementary school attend their local public schools, most children in preschool attend private programs, although some public programs (which are funded by the city and/or state) are available (Magnuson & Waldfogel, 2005). In turn, parents – especially middle-class parents –

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typically play an active role in selecting preschool or day-care programs for their children (Cryer, Tietze, & Wessels, 2002). Research on heterosexual parents' school selection process has found that parents tend to consider a range of factors in choosing schools and daycares for their young children, with frequently mentioned concerns including logistical/practical factors (e.g., cost, location), school quality considerations (e.g., the school curriculum or philosophy), and, more rarely, value-related considerations (i.e., the degree to which parents' values match the schools' values) (Galotti & Tinkelenberg, 2009; Glenn-Applegate, Pentimonti, & Justice, 2011). Working-class parents may be more likely to emphasize practical concerns such as cost and location in their selection process than middle-class parents, in part because of differing constraints on their choices (e.g., in terms of money, transportation, and time; Smrekar & Goldring, 1999); but also because of differing views of education (e.g., middle-class parents may be more likely to view education as a "calculated decision that matches the values and attributes of the family... and child... to the best-fitting school"; Goyette, 2008, p. 117; Wells & Crain, 1997). Likewise, middle-class parents may be more likely to emphasize school quality in their selection process (Peyton, Jacobs, O'Brien, & Roy, 2001), perhaps in part because, as Lerner and Phillips (1994) note, parents with more education tend to view the role of early childhood education as a key context for learning and preparing for grade school, and as a starting point for children's long-term educational success.

No known research has focused on whether and to what extent the above school selection considerations are endorsed by sexual-minority parents of young children. It is expected that, like parents of children with special needs (Glenn-Applegate et al., 2011) and parents of bilingual children (McClain, 2010), sexual-minority parents – as well as adoptive parents – may consider additional issues related to the inclusiveness of the school community. Understanding what factors sexual-minority parents consider in selecting early educational environments for their children is important, as it will provide crucial insight into the school-related concerns and values of sexual-minority parents, and can inform teaching and practice in early childhood education. Furthermore, knowledge of sexual-minority parents' school-related considerations is of interest in that they may foreshadow what types of early childhood environments their children ultimately inhabit. Such knowledge is important, given that the early childhood educational environment impacts children's social, emotional, and cognitive development (Burger, 2010).

1.2. Sexual-minority parents' school selection

Research on school selection among sexual-minority parents with elementary school-age children can lend some insight into the school selection considerations of sexual-minority parents of preschoolers. Key data on this topic come from the Gay, Lesbian, and Straight Education Network (GLSEN)'s 2008 survey of 588 LGBT parents, most of whom were women and had a child in elementary school (Kosciw & Diaz, 2008). Although most parents reported that their children attended public schools (78%), this percentage was significantly lower than the national percentage (89%). Of the parents who sent their children to private schools, these schools were less likely to be religiously-affiliated schools (7%) and more likely to be independent schools (16%) than national percentages. Regarding LGBT parents' reasons for selecting their children's schools, parents most often reported that they chose the

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local or neighborhood school (59%) and that they chose the school based on academic reputation (54%). Other common reasons cited were the diversity of the school population (31%), the school's reputation for valuing diversity (22%), they knew other families at the school (29%), the sports/arts/music reputation of the school (29%), they knew that there were other children with LGBT parents there (17%), the school's reputation for being welcoming of LGBT families (17%), the academic approach (e.g., Montessori) (13%), special education services (12%), and language programs (10%). Parents of children of color were more likely to choose schools based on the diversity of the school population (43%) than were parents with a White student (25%), regardless of the race/ethnicity of the parents (about 16% of the families represented had White parent(s) and a child of color, and 14% of the families represented were comprised of one White and one non-White parent; Kosciw & Diaz, 2008).

In addition to the GLSEN survey, several qualitative studies have examined the school-related experiences of lesbian parents; indeed, research on gay fathers' school-related experiences is particularly sparse. Mercier and Harold (2003) interviewed 15 lesbian-parent families with children ranging from six months to 18 years. Similar to the GLSEN sample, the parents in this study often emphasized the importance of sending their children to schools that valued diversity, because they believed that "schools that value diversity of any type are more likely to respond well to lesbian-parent families" (p. 39). Consistent with this, Gartrell et al. (1999) interviewed 84 lesbian-parent families with toddlers about their plans for child care or preschool and found that 87% of mothers said that they planned to enroll their children in programs that included children and teachers of different social classes, genders, races, ethnicities, and cultures, out of a belief that "exposure to diversity was the most effective method of fortifying their children against homo-phobia" (p. 367). When the children in the study were five, 74% of the children's schools were described as multicultural and 33% had lesbian/gay staff members; by extension, under one-fifth (18%) of children had reportedly experienced homophobia from peers or teachers (Gartrell et al., 2000). Of note is that Gartrell et al. sample was drawn from metropolitan areas (e.g., San Francisco), which may have facilitated access to multicultural, gay-friendly school environments.

Finally, a qualitative study of 20 lesbian-parent families in Australia found that parents who could afford to send their children to private school often did so, in part because they seemed to believe that these schools would be more likely to accept and be inclusive of their families (Lindsay et al., 2006). Thus, in sum, the existing research suggests that lesbian mothers value diversity, broadly defined, as well as racial diversity, specifically (Kosciw & Diaz, 2008).

1.3. Experiences of mistreatment in early childhood settings

The early parent-school relationship is important, in that it can have positive implications for child development, and also lays the foundation for future parent involvement and school connection (Beveridge, 2005). In addition to playing an active role in the selection of preschools, parents of young children may also actively interact with their children's schools. Unlike parents of school-age children, parents of preschool-age children are usually

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in direct contact with the teachers and staff who are caring for their children, providing information about their children's personality and developmental stage, as well as recommendations about how best to support their children's growth (Beveridge, 2005; Rimm-Kaufman & Pianta, 2005). Parents of young children also often seek out more information from schools about what their children are learning, since their children may lack the cognitive or verbal skills to explain these details to them (Glover & Bruning, 1987) – although parents with more resources tend to have more communication with teachers (Bryant, Peisner-Feinberg, & Miller-Johnson, 2000; Lareau, 1987). Parents of young children may also inquire about their children's social experiences at school; although negative peer behavior is less of a concern in early childhood settings than elementary school (Sawyer, Mishna, Pepler, & Wiener, 2011), teasing in these settings does occur (Kirves & Sajaniemi, 2012).

The early interactions between sexual-minority parents and early educational environments are of great significance, inasmuch as these experiences can set the stage for parents' expectations about and involvement in their children's school lives more generally (Casper & Schultz, 1999), and, in turn, parent school involvement is related to child developmental outcomes, such that children with highly involved parents demonstrate greater social and cognitive skills, and fewer behavioral problems (Powell, Son, File, & San Juan, 2010). Perceived experiences of marginalization or mistreatment in early childhood settings, then, are particularly important to attend to, as they may have profound implications for sexual-minority parents' school connectedness and involvement (Kosciw & Diaz, 2008). Some research has examined sexual-minority parents' perceptions of exclusion and mistreatment in elementary school settings. More than half (53%) of the LGBT parents in the GLSEN survey described various forms of exclusion related to their sexual orientation from their children's school communities (Kosciw & Diaz, 2008). For example, parents were told that they could not be aids in their children's classrooms; that only one parent was allowed to attend a school event; and that their offers to assist with creating a more inclusive classroom were not welcome or needed. Further, 26% of LGBT parents reported being mistreated by other parents (e.g., being stared at or ignored). Not surprisingly, parents who reported higher levels of exclusion and mistreatment were less likely to be involved in volunteering at their children's schools (Kosciw & Diaz, 2008).

There is some evidence that sexual-minority parents with greater educational, financial, and geographic resources may perceive less exclusion in their children's schools. Casper and Schultz (1999) interviewed 17 lesbian and gay parents with children in preschool to 5th grade and found that parents who were middle-class, living in urban or "progressive" areas, and/or sent their children to private schools, reported more ease in being "out" and advocating for their children than parents with limited financial or geographic resources. In a rare study of working-class lesbian mothers, Nixon (2011) found that participants often felt like outsiders at their children's schools due to both their socioeconomic status (and, specifically, their own poor school histories) and also their sexual orientation. In turn, very few mothers discussed their concerns about bullying directly with their children's teachers, choosing instead to try to prepare their children to avoid, and if necessary cope with, bullying.

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1.4. Adoptive parents' experiences in school settings

Many sexual-minority parents adopt their children (Gates et al., 2007), creating additional dimensions of difference that they may consider in choosing school environments for their children. Of note is that a range of practical resources are available for adoptive parents of young children (e.g., that provide guidance on how to talk to teachers about their children's adoptive status as well as how to educate teachers about adoption in general; Child Welfare Information Gateway, 2012; Gilmore & Bell, 2006). However, little empirical work has examined adoptive parents' considerations in selecting schools for their children, or navigating and responding to adoption bias (e.g., the use of adoption-insensitive language by teachers and/or in curricula). The absence of this work is concerning, given that misinformation and stigma related to adoption – particularly transracial adoption – are still pervasive in the broader society (Goldberg, Kinkler, & Hines, 2011) and may trickle down into the attitudes and practices of teachers and other school personnel. Teachers may fail to understand or attend to the multiple dimensions of difference that may impinge upon the identity or experiences of adopted children (Enge, 1999). They may also neglect to discuss racial or family diversity in the classroom, perhaps because they believe that young children are too young to understand these issues (Husband, 2012; Robinson & Ferfolja, 2002), despite evidence to the contrary (Park, 2011).

Few studies have assessed adoptive parents' experiences related to their children's school environments. In a study of racial socialization practices among heterosexual parents who had adopted transracially, Vonk, Lee, and Crolley-Simic (2010) found that 54% of parents reported that they had chosen child care providers, teachers, or other role models similar to their children's race or ethnicity. Other studies (Goldberg, 2009; Mercier & Harold, 2003) have also observed that White parents who adopt transracially sometimes describe efforts to move to an area that is racially diverse, so that their children will grow up around, and attend schools with, other people who look like them. These studies suggest that for parents who adopt a child of a different race, the racial diversity of teachers and schools may take on heightened importance.

Speaking to issues of inclusion versus exclusion in schools, Nowak-Fabrykowski, Helinski, and Buchstein (2009) surveyed 23 heterosexual foster parents and found that most respondents reported their children's teachers and classrooms did not have any materials related to adoption, and felt that teachers should make more of an effort to assign lessons about adoption (e.g., during Adoption Month). Thus, respondents demonstrated a general sense that schools could be doing more than they were to incorporate the experiences and needs of adopted individuals and their families into their materials and curricula.

The research discussed thus far is limited by the fact that it has rarely included parents of young children, is primarily qualitative, and, when it includes sexual-minority parents, has tended to focus on lesbian mothers, not gay fathers. Despite these limitations, it provides insights into (a) the type of criteria that sexual-minority adoptive parents may value in choosing schools for their children; and (b) the possibility for sexual-minority adoptive parents to perceive mistreatment by their children's schools. First, the literature suggests that sexual-minority parents may be particularly likely to value school diversity (e.g., with regard to family structure and race). Second, it suggests that sexual-minority parents may perceive

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mistreatment at their children's schools, although such experiences may be mitigated by sending one's child to a private school (Kosciw & Diaz, 2008; Lindsay et al., 2006), and, indirectly, by the presence of financial and educational resources, as well as living in a "progressive" or gay-friendly area (Casper & Schultz, 1999).

1.5. The current study

This exploratory study examines a sample of 210 parents in 105 couples – 35 lesbian two-parent families, 30 gay two-parent families, and 35 heterosexual two-parent families – all of whom had adopted a child three years earlier. Both partners in each couple were surveyed. At the time of assessment, children in the sample were between 3.0 and 5.5 years (M age = 3.47) and enrolled in a preschool. Based on the literature, we proposed the following exploratory research questions.

1.6. School selection considerations

Research Question 1—Does the frequency by which parents consider school selection factors such as cost, location, educational philosophy, religion/language, racial diversity, and the presence of adoptive families vary according to parent sexual orientation, child race, family income, and parent education level?

We hypothesize that sexual-minority parents will be more likely to consider racial diversity and the presence of other adoptive families; parents of children of color will be more likely to consider racial diversity; and higher levels of financial/educational resources will be related to greater consideration of "quality" factors such as educational philosophy and religion/language offerings, greater consideration of diversity factors such as racial diversity and the presence of other adoptive families, and lesser consideration of "practical" factors such as cost and location.

Research Question 2—Among sexual-minority parents, does the frequency by which parents consider the presence of other lesbian/gay-parent families and school gay-friendliness vary by parent gender, child race, family income, or parent education level?

These are exploratory questions, and we do not have hypotheses about the role of gender or race. We expect higher levels of financial/educational resources to be related to greater consideration of lesbian/gay-parent families and greater consideration of school gay-friendliness.

1.7. Perceived experiences of mistreatment

Research Question 3—Do parents' perceptions of mistreatment related to adoptive status vary by parent sexual orientation, child race, family income, parent education level, or school type?

We do not have hypotheses about the role of parent sexual orientation. We hypothesize that parents of children of color will perceive more mistreatment; parents with fewer financial/educational resources will perceive more mistreatment; and parents whose children attend public preschools will perceive more mistreatment.

Research Question 4—Among sexual-minority parents, do parents' perceptions of mistreatment related to sexual orientation vary by parent gender, child race, the perceived gay-friendliness of one's community, family income, parent education, or school type?

We have no hypotheses about parent gender. We hypothesize that parents of children of color will perceive more mistreatment; parents who live in less gay-friendly areas will perceive more mistreatment; parents with fewer resources will perceive more mistreatment; and parents whose children attend public preschools will perceive more mistreatment.

2. Method

2.1. Description of the sample

Data were taken from a longitudinal study of the transition to adoptive parenthood. All 105 couples had adopted their first child three years earlier, and in all cases it was a single child. Respondents' data were included in the current study if their adopted child was in preschool.

Descriptive data for the full sample, and by family type, appear in Table 1. ANOVA revealed that the average family incomes for lesbian-, gay-, and heterosexual-parent families differed significantly, $F(2,103) = 5.29$, $p = .006$, such that gay male couples ($M = \$193,572$, $Mdn = \$150,000$, $SD = \$132,641$) had a significantly higher annual combined income than lesbian couples ($M = \$121,268$, $Mdn = \$105,000$, $SD = \$64,795$), $p < .001$, and heterosexual couples ($M = \$138,377$, $Mdn = \$120,000$, $SD = \$85,483$), $p = .012$. The sample as a whole is more affluent compared to national estimates for same-sex and heterosexual adoptive families, which indicate that the average household incomes for same-sex couples and heterosexual married couples with adopted children are \$102,474 and \$81,900, respectively (Gates et al., 2007). The sample as a whole was well-educated, $M = 4.49$ ($SD = 1.01$), where 4 = bachelor's degree and 5 = master's degree. Hierarchical linear modeling (HLM, in which parents were nested within couples) revealed no differences in education level by family type.

The adoptive parents in the sample were mostly White (91%), whereas the children in the sample were disproportionately of color (i.e., non-White, including biracial children): namely, 65% of couples adopted children of color. Fifty-two percent of couples adopted boys, and 48% of couples adopted girls. Chi square analyses indicated that the distributions of parent race, child race, and child gender did not significantly differ by family type.

The average age of the children in the sample was 3.47 years ($SD = .99$); ANOVA showed that child age did not differ by family type. ANOVA revealed that the number of hours that children spent in preschool differed by family type, $F(2,103) = 3.48$, $p = .034$, such that the children of gay male couples were in school for significantly more hours per week ($M = 31.16$, $SD = 11.81$) than the children of lesbian couples ($M = 25.07$, $SD = 12.48$), $p = .047$, and heterosexual couples ($M = 23.82$, $SD = 12.05$), $p = .012$. Somewhat paralleling these data, MLM revealed that the number of hours parents worked per week differed by family type, $F(2,103) = 3.22$, $p = .044$, such that gay male parents worked significantly more hours than lesbian parents ($M = 37.84$, $SE = 1.81$, versus $M = 31.99$, $SE = 1.64$), $p = .034$, but not heterosexual parents ($M = 33.01$, $SE = 1.60$).

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The types of preschool environments that children were enrolled in varied. One quarter of the sample reported that their children attended public preschools (e.g., YMCA-based programs), and three quarters of the sample reported that their children attended private preschools. Within the latter group, 33% were described as private day care-based programs, 20% were Montessori schools, 9% were religiously oriented or affiliated preschools (e.g., Catholic, Christian, Lutheran), and the remainder were given a wide range of descriptors (e.g., Waldorf; French Immersion; country day school; university-based).

2.2. Recruitment and procedures

Inclusion criteria for the larger study from which this sample was drawn were: (a) couples must be adopting their first child; and (b) both partners must be becoming parents for the first time. Participants were originally recruited during the pre-adoptive period (i.e., while couples were waiting for a child placement). Adoption agencies throughout the US were asked to provide study information to clients who had not yet adopted, typically in the form of a brochure which invited them to participate in a study of the transition to adoptive parenthood. We explicitly invited both same-sex and heterosexual couples to participate, since a major goal of the study was to understand how same-sex couples, specifically, experienced the transition to adoptive parenthood. Toward this end, U.S. census data were utilized to identify states with a high percentage of same-sex couples (Gates & Ost, 2004) and effort was made to contact agencies in those states. We recruited both heterosexual and same-sex couples through these agencies, in an effort to match couples roughly on geographic status and financial resources. Over 30 agencies provided information to their clients, and interested couples were asked to contact the principal investigator for details. Because some same-sex couples may not be “out” to agencies about their sexual orientation, several national gay organizations also assisted in disseminating study information.

Three years after they had been placed with a child, parents in the original study were contacted and asked to complete an in-depth questionnaire packet that focused on their experiences with regard to their children’s preschools. Questionnaires included closed- and open-ended items that addressed parents’ school-related values and experiences. Lesbian and gay parents – that is, parents who had identified themselves as being in a same-sex relationship at the first assessment point – were mailed questionnaires with several additional questionnaires and items aimed at identifying unique aspects of their experience as sexual-minority parents. The data for the current study are drawn from this three-year post-adoptive placement assessment point.

2.3. Measures

2.3.1. Outcomes

2.3.1.1. School selection factors: Parents were presented with the question, “What factors did you consider in choosing a school?” and asked to circle all that apply: 1. Cost; 2. Educational philosophy; 3. Religion or language emphasized at school; 4. Racial diversity; 5. Presence of other adoptive families; 6. Presence of other lesbian/gay-parent families; 7. Gay-friendliness of school; 8. Other (please list). Items 6 and 7 were asked of sexual minorities only. In the “other” category, the only factor that was listed frequently enough to

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treat as an outcome was “Location.” Thus, we explore how family type and child race relate to parents’ consideration of eight selection factors.

2.3.1.2. Mistreatment due to adoptive status: School mistreatment due to adoptive status was assessed using an eight-item measure developed for this study. Prior research and relevant popular press literature informed the development of this measure (Child Welfare Information Gateway, 2012; Kosciw & Diaz, 2008). Further, it was reviewed by several adoption scholars who provided feedback; several items were revised in response to their feedback. The measure assesses exclusion and mistreatment by teachers, school personnel, and other parents, related to the child’s adoptive status. Parents responded to these six items using a 1–5 scale (1 = not at all true, 5 = very true): 1. I have felt that my parenting skills were questioned because I am an adoptive parent; 2. I have felt mistreated by school staff because I am an adoptive parent; 3. I have felt that staff members/school personnel treat my child differently because he/she is adopted; 4. My child’s teacher uses language that acknowledges adoptive families (reverse scored); 5. My child’s teacher sensitively handles assignments that could be hurtful to adoptive families (e.g., family trees) (reverse scored); 6. My child’s school uses forms that allow families to identify themselves in the way that they choose (reverse scored). In addition, parents responded to the following two items using a different 1–5 scale (1 = not at all excluded, 5 = very excluded): 1. To what degree do you feel excluded from your child’s school on the basis of your status as an adoptive family?; 2. To what degree do you feel excluded by the parents of your children’s peers on the basis of your status as an adoptive family? An exploratory factor analysis (EFA) using principal components analysis (PCA) showed acceptable factor loadings from .41 to .64. A composite score was created by taking the average across the individual items. Alpha = .71 for this scale (.70 for lesbians, .68 for gay men, and .73 for heterosexual parents).

2.3.1.3. Mistreatment due to parental sexual orientation: School mistreatment due to sexual orientation was assessed using an eight-item measure developed for this study. Prior work informed the development of this measure (Casper & Schultz, 1999; Kosciw & Diaz, 2008). The measure was reviewed by several scholars who studied sexual-minority parent families, and several items were revised in response to their input. This measure assesses exclusion and mistreatment by teachers, school personnel, and other parents, related to parents’ sexual orientation, and was completed by lesbian and gay parents only. Parents responded to the following six items using a 1–5 response scale (1 = not at all true, 5 = very true): 1. I have felt that my parenting skills were questioned because I am a lesbian/gay parent; 2. I have felt mistreated by school staff because I am a lesbian/gay parent; 3. I have felt that staff members/school personnel treat my child differently because his/her parents are lesbian/gay; 4. My child’s teacher uses language that acknowledges lesbian/gay parent families (reverse scored); 5. My child’s teacher sensitively handles assignments that could be hurtful to lesbian/gay-parent families (e.g., Mother’s Day/Father’s Day) (reverse scored); 6. My child’s school uses forms that allow families to identify themselves in the way that they choose (reverse scored). Parents also responded to the following two items using 1–5 scale (1 = not at all excluded, 5 = very excluded): 1. To what degree do you feel excluded from your child’s school on the basis of your sexual orientation?; 2. To what degree do you feel excluded by the parents of your children’s peers on the basis of your sexual orientation?

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An EFA using PCA for extraction showed factor loadings from .36 to .63. The one item with a loading lower than .40 was item 3, referring to treatment of the child. As the factor loading was close to .40, and we wanted the two mistreatment scales to contain parallel items, all items were retained for the analyses. A composite score was created by taking the average across the individual items. Alpha = .73 for the scale (.75 for lesbians, .70 for gay men).

2.3.2. Predictors

2.3.2.1. Sexual orientation: We examined differences by parent sexual orientation by creating a dummy variable where 1 = heterosexual parent, and 0 = sexual-minority parent. In follow-up analyses, we included two dummy variables (1 = gay male, 0 = not gay/everyone else), lesbian (1 = lesbian, 0 = not lesbian/everyone else), which enabled us to detect differences across all groups. By including the lesbian and gay male dummy variables (but not heterosexual), we could test whether lesbian couples differed from heterosexual couples and whether gay couples differed from heterosexual couples. By changing the default group to include the gay male and heterosexual (but not lesbian) dummies, we could test for differences between gay couples and lesbian couples.

2.3.2.2. Child race: Child race was dummy coded such that 1 = of color and 0 = White, where “of color” includes biracial and multiracial children. We also considered other codings of child race, namely: Black child (1) versus non-Black child (0); internationally adopted from non-Anglo country (i.e., child with cultural and racial differences) (1) versus others (0); and transracial (1) versus inracial (0) adoption, where “transracial” refers to adoptions where the parent and child are of different races, and “inracial” refers to adoptions where the parent and child are of the same race. We examined the effect of these other codings of child race in follow-up analyses given the possibility that the salience and meaning of race may vary depending upon how it is coded or operationalized.

2.3.2.3. Perceived community homophobia: We asked parents, “How gay-friendly is your immediate community?” and provided these response options: 1 = extremely gay-friendly, 2 = somewhat gay-friendly, 3 = neutral, 4 = not very gay-friendly, and 5 = not at all gay-friendly. Higher scores indicate greater perceived homo-phobia/less gay-friendliness. We included this as a predictor in our analyses predicting perceived mistreatment due to sexual orientation given evidence that lesbian parents who perceive their communities as progressive report more positive experiences with their children’s schools (Casper & Schultz, 1999). Of note is that we also asked parents about their perceptions of neighborhood gay-friendliness specifically (see Goldberg & Smith, 2011, for an examination of the relationship between neighborhood gay-friendliness and parents’ mental health); thus, respondents were explicitly prompted to consider the gay-friendliness of the broader community in which they lived.

2.3.3. Controls

2.3.3.1. Family income: We used parents’ combined annual income as a control given its association with parents’ school consideration criteria, whereby, for example, parents with less income are more likely to consider cost, and less likely to consider school philosophy/quality, in their selection process (Early & Burchinal, 2001; Leslie, Ettenson, & Cumsille,

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2002); although some studies have not found associations between income and child care/preschool considerations or values (Cryer & Burchinal, 1997).

2.3.3.2. Education: Parents' education ranged from 1 to 6 where 1 = less than high school education, 2 = high school diploma, 3 = associate's degree or some college, 4 = bachelor's degree, 5 = master's degree, and 6 = Ph.D./M.D./JD. We included education as a control given its association with some school selection criteria. For example, parents with less education have been found to place more emphasis on cost (Leslie et al., 2002).

2.3.3.3. School type: Parents were asked to indicate whether their child attended a public or private preschool. School type was dummy coded such that 1 = private school and 0 = public school. We included school type as a control given that lesbian parents have been found to expect less mistreatment in private schools than public schools (Lindsay et al., 2006).

2.3.3.4. Number of hours in school: Number of hours in school was included as a control in follow-up analyses examining school selection criteria and perceived mistreatment.

2.3.3.5. Child age: Child age, in months, was included as a control in follow-up analyses examining school selection criteria and perceived school mistreatment.

2.3.3.6. Parent race: Parent race (1 = of color and 0 = White) was included as a control in follow-up analyses examining school selection criteria and perceived school mistreatment.

2.4. Analytic strategy: hierarchical linear modeling

2.4.1. Hierarchical linear modeling—As both parents in each couple reported on their own school selection criteria and experiences, hierarchical linear modeling (HLM) was used to analyze the data. HLM permits examination of dyadic data (such as partners nested in couples) and provides accurate standard errors for testing the regression coefficients relating predictors to outcome scores (Kenny, Kashy, & Cook, 2006; Smith, Sayer, & Goldberg, 2013). The variance in the outcome is partitioned into the variance that occurs within couples (how partners differ from each other) and the variance that occurs between couples (how couples differ from each other). Predictors, both those that vary by couples (e.g., family income), and by partner (e.g., education), can then be added to explain this variance.

The hierarchical linear models tested were two-level random intercept models such that both parents' reports (Level 1) were nested within the couple (Level 2). A single intercept was used as there was no characteristic meaningful to the analyses (such as parent gender) available to distinguish between the two parents in a couple (Smith et al., 2013). In Level 1 of the unconditional model, the intercept, β_{0j} represents average outcome score for each couple, and r_{ij} represents the deviation of each member of the couple from the couple average. This intercept is treated as randomly varying; that is, it is allowed to take on different values for each couple. The intercepts that are estimated for each couple are treated as an outcome variable at Level 2. The intercept in the Level-2 equation, γ_{00} , provides an estimate of the average outcome score across couples and u_{0j} represents the deviation of each couple from the overall average across all couples.

Level 1 (within couples):

$$Y_{ij} = \beta_{0j} + r_{ij}$$

Level 2 (between couples):

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

where Y_{ij} represents the outcome score of partner i in dyad j , where $i = 1, 2$ for the two members of the dyad. In addition to the above “fixed effect” estimates (e.g., the γ_{00} 's), estimates of the variance of the “random effects” both within and between couples are provided (e.g., the variance of the r_{ij} 's and the u_{0j} 's), as well as the covariance between partners. Predictors can then be added to the model, with those that vary within couples (e.g., education level) added at Level 1 and those that vary between couples (e.g., family income) added at Level 2. HLM was also used to examine mean differences by family type on the descriptive variables for which there was more than one report per family (e.g., parents' work hours).

HLM of dyadic data does not, however, always derive accurate parameter estimates, when applied to dichotomous outcomes (or other outcomes requiring a link function; Raudenbush, 2008; Smith et al., 2013). We used hierarchical general linear modeling (HGLM) with a La Place transformation to improve parameter estimation (Raudenbush, Yang, & Yosef, 2000) to address Questions 1 and 2 regarding whether or not parents considered each of the eight selection factors, for which all outcomes were dichotomous (i.e., whether or not parents considered the factor). As a check, we refit all models examining dichotomous outcomes using logistic regression. Continuous variables (i.e., income) were grand mean-centered. Dichotomous variables (sexual-minority versus heterosexual couple; White child versus child of color; public versus private school) were dummy coded (0, 1). To examine for collinearity, each predictor was entered alone as well as in combination with each other variable.

2.4.2. Follow-up analysis—In our analyses of school selection considerations, we first substituted several alternate codes for child race (i.e., Black versus non-Black; internationally adopted from non-Anglo country versus not; transracial adoption versus inracial), out of an awareness that complexities of race, ethnicity, and culture may be difficult to capture. Second, we conducted follow-up analyses controlling for the number of hours children were in school, child age, and parent race. Third, to ascertain whether there were differences in findings for lesbian versus gay male parents, all models were fit using separate dummy variables (0, 1) for lesbian and gay men, and then refit, changing the default category (i.e., gay male, heterosexual), so that differences between all groups could be examined. In our analyses of perceived mistreatment, we conducted follow-up analyses controlling for the number of hours children were in school, child age, parent race, and type of adoption (inracial/transracial). We then examined whether there were differences in findings for lesbian versus gay male parents.

3. Results

3.1. School selection factors: descriptives

Table 2 presents the percentage of parents who endorsed considering each factor in selecting a school for their child, for the full sample and broken down by family type, child race, and school type (private versus public school: 75% of the sample had their child enrolled in a private school). As Table 2 reveals, educational philosophy was the most frequently endorsed consideration (82%), for the full sample and for each group. Cost was the second most frequently cited consideration, for the full sample (60%) and for heterosexual parents (62%). Among sexual-minority parents, however, the gay-friendliness of the school was the second most common consideration, with 66% of lesbians and 69% of gay men indicating gay-friendliness as a concern in their selection of a school. Cost followed close behind, with 62% of lesbians and 55% of gay men indicating that cost factored into their selection of a school. Racial diversity was the fourth most commonly endorsed consideration, for the full sample (40%), and for each group – although there was significant variability by group, with 57% of lesbians, 38% of gay men, and 28% of heterosexuals indicating that they considered racial diversity. Location was not offered as a specific option, however, it was the fifth most frequently endorsed consideration (26%) according to responses to the “Other” category. Fewer than 25% of sexual-minority participants (16% of lesbians, 24% of gay men) considered the presence of other lesbian/gay-parent families, and just 11% of the full sample considered the presence of other adoptive families in their search for a school. Finally, just 10% of the sample considered the religion or language offerings of the school.

Table 2 also shows the breakdown by child race. As Table 2 reveals, there is a noticeable difference in the consideration of racial diversity: 26% of parents of White children compared to 48% of parents of children of color considered racial diversity. Table 2 shows the breakdown by school type. All considerations, with the exception of cost, were more likely to be named by parents of children who attended private schools, while cost was cited more often by parents of children attending public schools.

In response to the request to list other considerations in choosing a school, in addition to mentioning location (26%), small percentages of parents identified the reputation of the school (4.5%), special needs accommodations (2.5%), and the teacher-child ratio (1.5%) as shaping their school selection. Other less-often cited considerations were cleanliness and flexibility.

The intraclass correlation (ICC) for mistreatment due to adoptive status (i.e., the correlation between partners’ reports of mistreatment) was .42. The ICC for mistreatment due to sexual orientation was .68, and for community gay-friendliness, it was .62. Thus, partners within couples tended to have more similar perceptions of sexuality-related stigma than adoption-related stigma. For each of the school selection considerations (all of which were dichotomous variables), we determined intracouple agreement by calculating the percentage of couples in which both partners considered, or did not consider, a given factor. The percentage of couples with convergent (as opposed to discrepant) reports for each factor is as follows: cost (67%); location (58%); educational philosophy (88%); religion/language (88%); racial diversity (81%); adoptive family presence (86%); lesbian/gay-parent family

presence (73%); school gay-friendliness (60%). Thus, the majority of partners within couples had convergent reports for each type of selection criteria.

3.2. School selection factors by sexual orientation and child race

Hierarchical general linear modeling (HGLM) for dichotomous outcomes was used to examine whether parent sexual orientation (sexual-minority parent versus heterosexual parent) and child race predicted each type of school selection factor (Table 3). Two control variables, parents' income and education level, were entered given that financial and educational resources may influence their selection criteria (Goyette, 2008; Peyton et al., 2001). Income was related to cost as a selection factor, such that parents with less income were more likely to consider cost, $B = -.005$, $SE = .002$, $OR = .99$, $t(165) = -2.45$, $p = .016$. Education was related to location as a selection factor, such that parents with less education were more likely to consider location, $B = -.43$, $SE = .21$, $OR = .65$, $t(165) = -2.06$, $p = .041$.

In predicting racial diversity as a selection factor (Table 3), we found a significant effect of child race, such that parents of children of color were more likely to consider racial diversity than parents of White children, $B = .97$, $SE = .45$, $OR = 2.65$, $t(165) = 2.12$, $p = .035$. Parent sexual orientation was also significant, such that heterosexual parents were less likely to consider racial diversity than sexual-minority parents, $B = -1.37$, $SE = .43$, $OR = .25$, $t(165) = -3.20$, $p = .002$. Parent education was also significant, such that more educated parents were more likely to consider racial diversity, $B = .43$, $SE = .22$, $OR = 1.52$, $t(165) = 2.00$, $p = .047$.

Regarding the presence of other adoptive families (Table 3), we found that parent sexual orientation was associated with the presence of adoptive families as a selection factor, such that heterosexual parents were less likely than sexual-minority parents to consider the presence of adoptive families at the school, $B = -1.32$, $SE = .62$, $OR = .27$, $t(165) = -2.11$, $p = .036$. The effect of education was also significant, such that more educated parents were more likely to consider whether there were other adoptive families at the school than less educated parents, $B = 1.32$, $SE = .39$, $OR = 3.75$, $t(160) = 3.37$, $p = .001$. There were no significant findings for parent sexual orientation, child race, income, or education in predicting educational philosophy or religion/language as selection factors.

3.3. School selection factors by parent gender and child race (sexual-minority parents only)

Turning to the sexual minority-specific selection factors (Table 4), we found that education level was associated with the presence of other lesbian/gay-parent families as a selection factor, such that sexual-minority parents with higher levels of education were more likely to consider this than less educated sexual-minority parents, $B = .82$, $SE = .37$, $OR = 2.28$, $t(85) = 2.18$, $p = .031$. Likewise, we found that education level was also related to the gay-friendliness of the school as a selection factor, at the level of a trend, such that sexual-minority parents with higher levels of education were somewhat more likely to consider the gay-friendliness of the school than less educated sexual-minority parents, $B = .45$, $SE = .24$, $OR = 1.57$, $t(85) = 1.85$, $p = .067$.

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3.3.1. Exploratory follow-up analyses

3.3.1.1. Additional controls: We added several additional controls in follow-up analyses predicting school selection criteria: namely, hours in school per week, child age, and parent race. None of the findings changed with the addition of these controls (or when the original controls were removed), and none of the additional variables were significant, with one exception. Parents whose children were in preschool more hours per week were more likely to consider the religion/language of the school, $B = .06$, $SE = .03$, $OR = 1.06$, $t(162) = 2.10$, $p = .037$. Further, none of the findings changed with two out of the three alternate codings for child race. Both Black versus non-Black and transracial versus inracial significantly predicted consideration of racial diversity. Specifically, parents who adopted Black children were more likely to consider racial diversity, $B = 1.05$, $SE = .48$, $OR = 2.86$, $t(165) = 2.17$, $p = .031$, and parents who adopted transracially were more likely to consider racial diversity, $B = 1.03$, $SE = .44$, $OR = 2.79$, $t(165) = 2.32$, $p = .021$. Non-Anglo versus Anglo did not predict racial diversity as a selection factor, however, indicating that adopting a child with both racial and cultural differences did not necessarily lead parents to consider racial diversity.

3.3.1.2. Differences between lesbian versus gay parents: To determine whether school selection considerations differed for lesbian parents and gay parents, we substituted lesbian and gay dummy codes (lesbian: 1, 0, where 1 = lesbian and 0 = not a lesbian; gay: 1, 0, where 1 = gay and 0 = not a gay man) for sexual orientation. This enabled us to probe for differences across all three family groupings (lesbian, gay, heterosexual), by altering the default category. Models showed no differences between lesbians and gay men in predicting any outcome.

In addition, we examined whether the findings for same-sex couples held up when lesbian and gay male parents were examined separately (lesbian and gay dummy variables were substituted for heterosexual versus sexual minority). These analyses showed fairly consistent findings for both lesbians and gay men. The significance for gay men fell to the level of a trend in predicting racial diversity as a school selection consideration, $B = .88$, $SE = .46$, $OR = 2.39$, $t(165) = 1.88$, $p = .062$, while the effect for lesbians remain significant, $B = 1.60$, $SE = .47$, $OR = 4.97$, $t(165) = 3.40$, $p = .001$. In addition, both lesbian, $B = 1.22$, $SE = .66$, $OR = 3.39$, $t(165) = 1.83$, $p = .069$, and gay, $B = 1.53$, $SE = .78$, $OR = 4.63$, $t(165) = 1.95$, $p = .052$, emerged as marginally significant in predicting the presence of other adoptive families as a selection consideration.

3.4. Perceptions of mistreatment due to adoptive status

Of interest was whether parent sexual orientation or child race predicted perceived school mistreatment due to adoptive status, controlling for income, education, and school type (Table 5). HLM analyses revealed that parent sexual orientation was marginally related to perceived mistreatment due to adoptive status, $F(1, 83) = 3.39$, $p = .069$; $B = .15$, $SE = .08$, $t(83) = -1.84$, $p = .069$, such that heterosexual parents perceived somewhat higher levels of mistreatment than sexual-minority parents. Of note is that parents reported relatively low levels of mistreatment due to adoptive status overall, with an overall M of 1.69 on a scale of 1–5 ($Mdn = 1.63$, $SD = .50$; range 1.00–3.71), and $M = 1.81$ ($Mdn = 1.75$, $SD = .52$, range

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1.00–3.71) for heterosexual parents, $M = 1.65$ ($Mdn = 1.62$, $SD = .46$, range 1.00–2.88) for lesbian parents, and $M = 1.52$ ($Mdn = 1.50$, $SD = .42$, range 1.00–3.00) for gay male parents. While several individual items were skewed, the overall distribution for the scale was only mildly skewed (skewness = .66, SE of skewness = .21).

3.5. Perceptions of mistreatment due to sexual orientation

When perceived mistreatment due to sexual orientation was treated as the outcome, gender (gay men versus lesbian women), child race, and perceived community gay-friendliness were included as predictors, with income, education, and school type included as controls (Table 5). Community gay-friendliness predicted perceived mistreatment related to sexual orientation, such that parents who perceived their communities as more unfriendly (more homophobic) reported more mistreatment, $F(1, 86) = 5.07$, $p = .027$; $B = .18$, $SE = .08$, $t(86) = 2.25$, $p = .027$. Sexual-minority parents reported relatively low levels of perceived mistreatment due to their sexual orientation, on average: $M = 1.66$ ($Mdn = 1.62$, $SD = .48$, range 1.00–3.13) for lesbian parents, and $M = 1.75$ ($Mdn = 1.50$, $SD = .81$, range 1.00–5.00) for gay parents. While several individual items were highly skewed, the overall distribution for the scale was moderately skewed (skewness = 1.03, SE of skewness = .20).

3.5.1. Exploratory follow-up analyses

3.5.1.1. Additional controls: Several additional controls were included in predicting the two school mistreatment outcomes (hours in school; child age; parent race: of color versus White; type of adoption: transracial versus inracial/same-race adoption). None were significant, either when the original controls were retained or when they were removed.

3.5.1.2. Differences between lesbian versus gay parents: To determine whether perceived mistreatment due to adoptive status differed for lesbian parents and gay parents, we substituted lesbian and gay dummy codes (lesbian: 1, 0, where 1 = lesbian and 0 = not a lesbian; gay: 1, 0, where 1 = gay and 0 = not a gay man) for sexual orientation, which, again, enabled us to probe for differences across all three family groupings. Perhaps due to insufficient power, once lesbian and gay were split into separate groups, neither dummy code was significant.

4. Discussion

The current exploratory study is the first that we know of to examine school selection considerations and perceived mistreatment among lesbian, gay, and heterosexual adoptive parents of preschool-aged children. The findings hold implications for early childhood educators.

In considering our descriptive data regarding the frequency by which parents considered each of the various school criteria, we found that educational philosophy was the most frequently named consideration for the full sample and for each group. This is consistent with prior research showing that educational philosophy often weighs heavily in parents' school selection process—especially among middle-class parents, such as the current sample (Peyton et al., 2001). Cost was the second most frequently endorsed concern, for the full

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sample and for heterosexual parents; however, among lesbian and gay parents, the gay-friendliness of the school was the second most common consideration, with cost following close behind. This finding is interesting, especially contrasting it with the findings of the GLSEN survey, which found that less than one-fifth of parents emphasized the school's reputation for being welcoming of LGBT-parent families in selecting a school (Kosciw & Diaz, 2008). This difference may reflect the fact that whereas most of the parents in the GLSEN sample had elementary school-age children, the majority of whom were in public schools, the parents in the current study were selecting preschools, most of which were private, and thus felt that they could weigh school gay-friendliness more heavily in their school selection. This finding carries implications for early childhood educators, in that it suggests that sexual-minority parents often consider the gay-friendliness of preschools in making decisions about where to send their children.

Indeed, the relatively low level of perceived mistreatment due to sexual orientation in our sample is perhaps in part due to the fact that the gay-friendliness of the school was an important school selection consideration for sexual-minority participants. In turn, their children typically ended up at schools that were at least relatively gay-friendly. This finding is consistent with prior qualitative research showing that sexual-minority parents often seek out progressive, gay-friendly schools in an effort to decrease the likelihood their children will be exposed to stigma based on their family structure (Casper & Schultz, 1999; Mercier & Harold, 2003). As the parents in this sample were fairly affluent, future work should examine patterns and predictors of perceived school mistreatment due to sexual orientation in samples that, for financial or geographic reasons, ultimately have less access to progressive and gay-friendly schools.

Racial diversity was the fourth most often endorsed consideration, for the full sample, and for each group – although lesbians were the most likely to consider racial diversity and heterosexuals were the least likely to consider it. This is consistent with the finding, in our multivariate analysis, that sexual orientation significantly predicted the degree to which parents considered racial diversity in selecting a school for their child. Location –which we did not explicitly ask about, but some participants identified as a salient variable influencing their decision – was the fifth most commonly endorsed consideration. Less than a quarter of sexual-minority parents considered the presence of other lesbian/gay-parent families in selecting a school, and about one-tenth of the overall sample considered the presence of other adoptive families. That these factors were rarely recalled as significant determinants of parents' choice of a school may reflect the overall paucity of these families in their communities, and, thus, their understanding that it was unrealistic to prioritize these in their selection process. Religion/language offerings were also rarely considered. This is somewhat consistent with the GLSEN survey, which found that only 10% of the parents in their sample emphasized the language programs offered in selecting a school; also, the children in the GLSEN sample were less likely than national percentages to be attending a religiously-affiliated school (Kosciw & Diaz, 2008).

We also examined the factors that predicted the degree to which parents considered each of these school criteria. Our finding that parents with less income were more likely to consider cost in selecting a school was unsurprising, and is consistent with prior work showing that

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practicality-based school considerations are more common among individuals with fewer resources (Leslie et al., 2002; Smrekar & Goldring, 1999). Affluent parents may feel less constrained by cost in choosing a preschool, and/or they may be more willing to spend money on a preschool, especially to gain valued aspects of schools – such as the presence of diverse families (Smrekar & Goldring, 1999). Similarly, less educated parents were more likely to consider location in choosing a preschool, again echoing previous findings showing that fewer resources are associated with greater consideration of practical factors in school selection (Smrekar & Goldring, 1999).

We found that more educated parents were significantly more likely to consider both the presence of racial diversity and other adoptive families in choosing a preschool for their children – and, among sexual-minority parents, the presence of other lesbian/gay-parent families and the gay-friendliness of the school. This likely reflects the role of education in shaping ideas about the value and role of schooling, whereby middle-class parents are more likely to prioritize the degree to which children’s educational environments match or reflect their own family’s values and attributes (Goyette, 2008; Wells & Crain, 1997). Our finding that, among sexual minorities, parents with more education were more likely to consider the presence of other lesbian/gay-parent families provides quantitative support for prior qualitative work suggesting that social class plays a role in shaping lesbian mothers’ values and priorities with regard to schooling (Casper & Schultz, 1999; Nixon, 2011).

Sexual-minority parents were more likely than heterosexual parents to consider the presence of adoptive families in choosing a school. These parents were likely aware of the multiple ways that their child would be different from their peers at school, and were thus motivated to find a school that seemed to reflect, normalize, and perhaps value at least this aspect of their family’s diversity. They may also simply place a higher value on diversity in general, as suggested by the fact that they were also more likely to value racial diversity, regardless of their children’s race. This notion is consistent with previous findings that sexual minorities often value schools’ inclusion of diversity because they believe that it bodes well for the school’s attitude toward lesbian/gay-parent families (Gartrell et al., 2000; Kosciw & Diaz, 2008). That heterosexual parents were less likely to consider the presence of adoptive families is interesting in light of the finding that they were also more likely to perceive mistreatment due to adoptive status than sexual-minority parents. Prior work has found that heterosexual adoptive parents possess greater internalized stigma surrounding adoption (Goldberg et al., 2011) and are more concerned about not appearing visibly different from the heterosexual nuclear family model (Goldberg, 2009), compared to lesbian/gay adoptive parents. In turn, heterosexual adoptive parents may not be as likely to emphasize their adoptive status and thus seek out the presence of adoptive families.

Consistent with prior work (Kosciw & Diaz, 2008; Vonk et al., 2010), adoptive parents of children of color were more likely to consider the school’s racial diversity than parents of White children. Indeed, this finding is consistent with Vonk et al.’s finding that over half of their sample of heterosexual parents of adopted children of color chose teachers and child care providers in part out of awareness of racial socialization issues. Future work is needed that (a) examines how parents of adopted, racial minority children make decisions about their children’s schooling, and (b) identifies the parent-, child-, and social-contextual factors

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that distinguish those parents of children of color who consider racial diversity in the selection process from those who do not.

Next we turn to the findings related to parents' experiences of school mistreatment. Sexual-minority parents were somewhat less likely to perceive school mistreatment due to their adoptive status than heterosexual parents. Sexual-minority parents may simply be more attuned to other aspects and areas of potential mistreatment – namely, mistreatment related to their sexual orientation. For lesbian and gay parents, adoption is not an alternative route to family building; it is one of the typical or expected routes to family building (Goldberg, 2010). Thus, they may expect and perceive less mistreatment related to their adoptive status, because they do not view this as the most remarkable aspect of their families. Heterosexual adoptive parents, on the other hand, may be more sensitive to how school administrators are responding to their adoptive status because they more clearly deviate from some (heterosexual, nuclear biologically-related family) norm. Further, prior research has documented higher levels of internalized stigma surrounding adoption in heterosexual adoptive parents as compared to same-sex adoptive parents (Goldberg et al., 2011). This higher level of stigma may predispose heterosexual parents to greater sensitivity regarding how their families are being treated by outsiders. Educators should thus be aware that heterosexual adoptive families may be especially sensitive to perceived exclusion or stigma related to their adoptive family status. In turn, they should be sensitive to how language and curricular materials may alienate all adoptive parents (e.g., by failing to acknowledge that not all mothers gave birth; by failing to acknowledge that not all children have been with their parents from birth).

Regarding school mistreatment due to sexual orientation, sexual-minority parents who perceived their communities as less gay-friendly were more likely to perceive school bias due to sexual orientation. This provides some indication of how aspects of the broader social context (e.g., community attitudes) may shape or “trickle down” into more localized school attitudes and practices (Bronfenbrenner, 1986). Prior qualitative research has also pointed to the significance of geographic context for parents' experiences of their children's schools, with lesbian and gay parents who lived in more “progressive” areas describing more positive experiences with their children's schools (Casper & Schultz, 1999). Parents who perceive their communities as gay-friendly may tend to find that their children's schools reflect and embody the communities' values; likewise, parents who feel that their communities are homophobic may face similar issues in the microcosm of their children's schools. Educators who teach in geographic areas that are relatively conservative and homophobic should be sensitive to the need to offset the stigma that lesbian/gay adoptive families may face in their broader communities.

In sum, we found that limited resources were related to practical concerns (cost, location) in choosing a school, such that parents with more financial and educational constraints were more likely to consider these factors. On the other hand, more educated parents tended to emphasize all aspects of diversity – adoptive families, racial diversity, and the presence of other lesbian/gay parents, among sexual minorities – illustrating how education may shape values and concerns about schooling. Sexual-minority parents were also more likely to consider racial diversity. Finally, we found that heterosexual parents were more likely to

perceive mistreatment due to their adoptive status than sexual-minority parents, and sexual minority parents living in less gay-friendly communities were more likely to perceive mistreatment due to sexual orientation than sexual minority parents living in more gay-friendly communities.

4.1. Limitations

The current study has several key strengths, when comparing it to the prior literature, including its examination of sexual-minority parents of young children, its inclusion of gay-father families, and its quantitative design. But there are a number of limitations to the study. First, we did not assess parents' decision-making prospectively (i.e., before they selected a preschool) as some research has done (Galotti & Tinkelenberg, 2009). Rather, we asked parents who had children currently enrolled in preschools about their selection considerations. Thus, it is possible that parents' choice of a preschool ultimately influenced what factors they recalled as most important to them. Reporting retrospectively on their consideration of their school selection process, they may have been motivated to identify a coherent and logical narrative whereby they chose a school that fit with their values and priorities. In essence, their recollections may have been influenced by their actual experiences with their children's schools. Second, we only measured perceived community gay-friendliness; we did not include an objective measure of community political attitudes or practices, for example. Further, our measurement of community gay-friendliness was based on a single item. Although this was not ideal, it is notable that other studies have also used one-item measures to assess contextual aspects of gay-friendliness (e.g., neighborhood gay-friendliness; Goldberg & Smith, 2011). A third limitation is that we did not provide definitions of "private" and "public" schools to participants; thus, it is possible that some parents may have misunderstood and misrepresented the type of school that their children attended. Fourth, we did not ask parents directly about location in our initial survey; they volunteered this as an additional factor that they considered, and thus we included it in analyses. Thus, the number of parents who considered location is likely an undercount. Fifth, our measures of mistreatment were created for the study, and lack established psychometric properties; thus, future research utilizing these measures is needed. Sixth, the sample was well-educated, financially well-off, and mostly White. Greater diversity in parent race, for example, might have allowed us to discern interesting differences for White parents versus parents of color, and to probe differences among parents of different racial and ethnic groups.

4.2. Conclusions and implications for practice

Early childhood educators and administrators should be aware that sexual-minority adoptive parents are likely to be attentive to issues of family, racial, and sexual diversity in evaluating and selecting preschools for their children. Parents of preschoolers may be particularly sensitive to these issues, inasmuch as they have more contact with and control over their children's school environments than parents of school-age children (Beveridge, 2005). Educators who wish to create a welcoming atmosphere for sexual-minority parents, then, should consider how to demonstrate best their commitment to diversity in their schools and classrooms. This may require additional professional training, inasmuch as childhood educators and preschool teachers often receive minimal preparation for working with sexual-

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minority parent families, and may experience uncertainty about how to enact a more inclusive and affirming approach to these families (Kintner-Duffy, Vardell, Lower, & Cassidy, 2012). Early childhood educators may also benefit from training that encourages awareness and knowledge of adoptive-parent families – particularly heterosexual adoptive-parent families, who may be especially sensitive to adoption-related stigma and exclusion. On a more general level, it is critical that early childhood educators recognize the growing diversity of contemporary families in the US, and consider issues of adoption, family structure, and race in thinking about curriculum development and in ensuring classroom environments that are welcoming of all families.

Insomuch as preschool is a key stage during which children are beginning to develop an understanding of basic concepts such as race, ethnicity, gender, and families (Trolley, Magerkorth, & Fromme, 1999), and family structures are becoming increasingly diverse (Gates et al., 2007; Goldberg, 2010), it is critical that early childhood educators are educated about the benefits of creating a more inclusive curriculum and overall approach to teaching about families and diversity. Preschool is the stage during which children are often beginning to comprehend, and are thus receptive to, lessons about diversity and difference (Trolley et al.). In the absence of such lessons, even very young children may develop heterosexist and racist sentiments (Robinson & Ferfolja, 2002), creating an environment in which children with sexual-minority parents – as well as children of color and adopted children – may feel stigmatized, excluded, or ignored.

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Table 1

Demographics for the full sample and by family type.

	Family type			
	Full sample (<i>M, SD, or %</i>)	Lesbian (<i>M, SD, or %</i>)	Gay (<i>M, SD, or %</i>)	Heterosexual (<i>M, SD, or %</i>)
Family income	\$148,827 (\$99,753)	\$121,268 (\$64,795)	\$193,572 (\$132,641)	\$138,377 (\$85,483)
Education	4.49 (1.01)	4.46 (1.04)	4.50 (1.01)	4.48 (.99)
Work hours	34.87 (17.70)	31.99 (16.72)	37.84 (15.81)	33.01 (19.32)
Hours in school (Child)	26.12 (12.39)	25.07 (12.48)	31.16 (11.81)	23.82 (12.05)
Child age	3.47 (.99)	3.37 (.98)	3.39 (.96)	3.56 (1.04)
Parent race (White)	91%	91%	95%	88%
Child race (White)	35%	25%	48%	33%
Child gender (Boys)	52%	49%	58%	53%

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Table 2

School selection considerations by family type, child race, and school type.

	Family type			Child race			School type	
	Full sample (%)	Lesbian (%)	Gay (%)	Hetero (%)	White (%)	Of color (%)	Private (%)	Public (%)
Cost	60%	62%	55%	62%	58%	61%	59%	63%
Location	26%	24%	25%	28%	25%	27%	27%	24%
Educational philosophy	82%	81%	87%	79%	78%	83%	90%	61%
Religion/language	10%	5%	15%	10%	13%	8%	11%	7%
Racial diversity	40%	57%	38%	28%	26%	48%	43%	32%
Adoptive family presence	11%	14%	13%	6%	10%	11%	12%	7%
LG family presence	n/a	16%	24%	n/a	20%	20%	23%	11%
Gay-friendliness	n/a	66%	69%	n/a	71%	66%	74%	52%

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Table 3

Predicting consideration of school selection factors (full sample).

Predictors	Cost β (SE)	Odds ratio	Locat β (SE)	Odds ratio	Educ Phil β (SE)	Odds ratio	Relig/Lang β (SE)	Odds ratio	Racial divers β (SE)	Odds ratio	Adopt Fam β (SE)	Odds ratio
Constant	-.60 (.81)	.54	.55 (.94)	1.74	1.53 (1.25)	4.63	-2.55 (1.45) ⁺	.08	-2.42 (1.02) [*]	.09	-8.16 (2.04) ^{***}	.0003
Child race (of color)	.32 (.36)	.138	.38 (.45)	1.47	.65 (.52)	1.91	-.53 (.62)	.58	.97 (.45) [*]	2.65	.08 (.62)	1.08
Sexual or (hetero)	.03 (.34)	1.03	.04 (.41)	1.03	.03 (.51)	1.03	-.07 (.60)	.93	-1.37 (.43) ^{**}	.25	-1.32 (.62) [*]	.27
Family income	-.005 (.002) [*]	.99	.003 (.002)	1.00	-.002 (.002)	.99	-.001 (.003)	.99	-.002 (.002)	.98	-.002 (.002)	.99
Education	.18 (.18)	1.19	-.43 (.21) [*]	.65	-.04 (.27)	.96	.12 (.31)	1.12	.43 (.22) [*]	1.52	1.32 (.39) ^{**}	3.75

* p < .05.

** p < .01.

*** p < .001.

⁺ p < .10.

Table 4

Predicting consideration of presence of lesbian/gay-parent families and school gay-friendliness (sexual-minority parents only).

Predictors	Presence of LG- parent families $\beta(SE)$	Odds ratio	Gay-friendliness $\beta(SE)$	Odds ratio
Constant	5.82 (1.99)	.003	-1.39	.25
Female	-.57 (.66)	.57	.30 (.55)	1.34
Child race (of color)	1.10 (.75)	3.02	-.11 (.51)	.90
Family income	-.002 (.003)	1.00	-.004 (.003)	1.00
Education	.82 (.37)*	2.28	.45 (.24) ⁺	1.57

*
p < .05.

⁺
p < .10.

Table 5

Predicting perceived mistreatment related to adoption (full sample) and sexual orientation (sexual-minority parents only).

	Due to adoption (estimate, <i>SE</i>)	Due to sexual orientation (estimate, <i>SE</i>)
Intercept	1.72 (.20) ***	1.21 (.35) **
Same-sex	-.15 (.08) ⁺	
Male		15.16
White	.06 (.08)	-.20 (.15)
Public	.02 (.09)	.07 (.16)
Education	.007 (.04)	.05 (.06)
Family income	.001 (.004) *	-.003 (.007)
Perceived community homophobia		.18 (.08) *

Note: Sexual orientation was dummy coded (0, 1), with heterosexual as the default group. Child race was dummy coded (0, 1), with of color as the default group. Follow-up analyses utilized gender (0, 1), with female as the default group, when comparing just gay men and lesbians. Family income was mean centered. MLM was not used for logistic regression because MLM provides biased estimates when using link functions (such as a log link) in modeling dyadic data (Raudenbush, 2008).

*
p < .05.

**
p < .01.

p < .001.

⁺
p < .10.

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Predicting Parents' School Engagement Among Lesbian, Gay, and Heterosexual Adoptive Parents of Kindergarteners

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Abstract

Little research has explored parental engagement in schools in the context of adoptive parent families or same-sex parent families. The current cross-sectional study explored predictors of parents' self-reported school involvement, relationships with teachers, and school satisfaction, in a sample of 103 female same-sex, male same-sex, and heterosexual adoptive parent couples (196 parents) of kindergarten-age children. Parents who reported more contact by teachers about positive or neutral topics (e.g., their child's good grades) reported more involvement and greater satisfaction with schools, regardless of family type. Parents who reported more contact by teachers about negative topics (e.g., their child's behavior problems) reported better relationships with teachers but lower school satisfaction, regardless of family type. Regarding the broader school context, across all family types, parents who felt more accepted by other parents reported more involvement and better parent–teacher relationships; socializing with other parents was related to greater involvement. Regarding the adoption-specific variables, parents who perceived their children's schools as more culturally sensitive were more involved and satisfied with the school, regardless of family type. Perceived cultural sensitivity mattered more for heterosexual adoptive parents' relationships with their teachers than it did for same-sex adoptive parents. Finally, heterosexual adoptive parents who perceived high levels of adoption stigma in their children's schools were less involved than those who perceived low levels of stigma, whereas same-sex adoptive parents who perceived high levels of stigma were more involved than those who perceived low levels of stigma. Our findings have implications for school professionals, such as school psychologists, who work with diverse families.

Keywords

adoption; gay; kindergarten; lesbian; parent–teacher relationships; school involvement; school satisfaction

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Individuals, including children, are profoundly impacted by the settings in which they live (e.g., home, school, neighborhood, and community) as well as the relationships among these systems (Bronfenbrenner, 1995). In particular, the dynamic relationship between family and school greatly contributes to child development (Bronfenbrenner & Morris, 1998). Parents' engagement with their children's schools is widely recognized as one important way in which the family-school relationship may shape child outcomes. In fact, school engagement is the main focus of family-school relationship standards established by leading national organizations, such as the National Parent Teacher Association (2014). School professionals recognize that when parents develop strong relationships with teachers and seek involvement in schools, such relationships may (a) model for children the importance of relationships with teachers, thus affecting their academic experience, and (b) provide teachers with a more thorough understanding of children's developmental needs and strengths, via the information that they gain from parents (Dearing, Kreider, & Weiss, 2008; Hoover-Dempsey & Sandler, 1995). Parents' engagement in school (e.g., via volunteering) may also benefit child-teacher relationships indirectly, as such involvement can promote positive family-teacher interactions (Dearing et al.; Hornby, 2011). In turn, school psychologists can play a valuable role in promoting parent engagement through home-school collaborations and providing appropriate assessment and interventions for parents, teachers, and other school professionals (Beveridge, 2005).

The kindergarten period in particular is often recognized as an optimal time to foster and promote school engagement (Powell, Son, File, & San Juan, 2010), inasmuch as parents' early school engagement may set the stage for long-term patterns of school-based involvement and relationships with the educational system (Beveridge, 2005; Malsch, Green, & Kothari, 2011). Indeed, parents' school engagement during preschool and kindergarten has been linked to children's later academic and achievement outcomes, such that parents who demonstrate more school-based involvement and connection early on have children with better grades, attendance, homework completion, and state test results (Castro, Bryant, Peisner-Feinberg, & Skinner, 2004; Clements, Reynolds, & Hickey, 2004; Powell et al., 2010). Parents who have regular and direct contact with their children's schools and teachers, and who therefore model an appreciation for school engagement and learning, are more likely to have children who demonstrate positive engagement with learning and their schools (McWayne, Hampton, Fantuzzo, Cohen, & Sekino, 2004). Thus, parental engagement in children's education clearly benefits children's school success (Hoover-Dempsey & Sandler, 1997; McWayne et al.).

There are several dimensions of parent engagement in children's education, including school-based involvement (e.g., volunteering), the parent-teacher relationship, and home-based involvement (e.g., help with homework; Waanders, Mendez, & Downer, 2007). In this paper, we focus on parents' involvement in the school context, as well as their relationships with teachers; we do not assess parents' home-based involvement, in part because of the young age of the sample. We also examine parents' overall endorsement of their child's school (i.e., school satisfaction). We examine these outcomes in 103 adoptive parent couples: 35 female same-sex, 28 male same-sex, and 40 heterosexual adoptive couples,

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based on data from 68 sexual minority women, 54 sexual minority men, 35 heterosexual men, and 39 heterosexual women.

Although parents' school engagement is widely recognized as a crucial component of successful family-school partnerships, and is often examined in the literature (see Powell et al., 2010), no work has examined parent-school relationships in adoptive families, and little work has explored parent-school relationships in same-sex parent families (Fedewa & Clark, 2009; Kosciw & Diaz, 2008). Such work is important, in order to identify whether established predictors of school engagement hold up in these understudied family forms, as well as to identify unique predictors of school engagement. Same-sex parent families and adoptive families represent understudied family forms that are vulnerable to marginalization and exclusion in society and in the school setting, which may in turn have implications for their perspectives on and relationships with their children's schools (Goldberg & Smith, 2014). Many aspects of the school environment assume a biological relationship between parent and child, and the language of teachers and parents, class assignments, and school forms may serve to stigmatize or exclude adoptive families. These problems can be further compounded for same-sex parent families, who not only encounter—and often violate—the assumption of biological relatedness between parents and children in the school context but also face heterosexist language, curricula, and school forms that assume the existence of different-sex parents (Byard, Kosciw, & Bartkiewicz, 2013). Understanding predictors of, and processes related to, parent engagement in adoptive and same-sex parent families is highly relevant to the field of school psychology, as such families become increasingly common and visible. As with any cultural competency, understanding the concerns and interests of adoptive and same-sex parents should inform the work that school psychologists engage in, including assessment, consultation, intervention, and systems change (Nastasi, 2006). School psychologists, as well as other school personnel, will be more effective if they can understand, anticipate, and ideally prevent barriers to school engagement among same-sex and heterosexual adoptive parent families. Indeed, strong and healthy parent-school relationships have the capacity to benefit parents, children, and schools (Beveridge, 2005).

The Parent Context

Parents' personal characteristics are important to take into account in considering parent-school relationships. For example, parents' sexual orientation and gender may have implications for how they approach their children's schooling (e.g., their level of engagement) as well as how schools respond to them (e.g., their receptivity and openness).

Sexual orientation

Although all adoptive families may face marginalization in schools, same-sex parent families face additional issues, inasmuch as they violate several assumptions about families. Namely, they violate the assumptions of both parent-child (biological) relatedness and parental heterosexuality (Byard et al., 2013). Their deviation from heteronormative family ideals, in turn, renders them highly visible and thus vulnerable to marginalization, exclusion, and stigmatization.

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Some research suggests same-sex parents may actually be more involved in their children's education, on average, as compared to heterosexual parents. Namely, a survey of over 500 same-sex parents by the Gay, Lesbian, Straight Education Network (GLSEN) found that the parents surveyed—who had children ranging from kindergarten through 12th grade—were more likely to have volunteered at their child's school (67% vs. 42%) and to have attended events such as Back-to-School night or parent-teacher conferences (94% vs. 77%), compared to a national sample (Kosciw & Diaz, 2008). Such findings suggest that same-sex parents are, as a group, concerned about the quality of their children's education and the schools of which they are part. Notably, their involvement in schools may be driven by their desire to ensure that their children are not discriminated against. That is, they may feel that their presence makes it harder for the school to ignore, marginalize, or discriminate against their children or families (Goldberg, 2010).

Contrasting data, however, have been reported by Fedewa and Clark (2009), who used the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K) dataset to compare same-sex parent and heterosexual-parent families in terms of their self-reported level of parent communication with the school and the strength of their home-school partnerships. Fedewa and Clark—who, unlike Kosciw and Diaz (2008), focused specifically on parents of young children—found no evidence for differences in parent-school relationships by family type. Thus, a central question is whether same-sex parents will report higher levels of parent involvement in their children's schools than heterosexual parents.

Also of interest is whether parents' relationships with teachers and school satisfaction vary by parent sexual orientation. The GLSEN survey—which provides some of the only data on this topic—found that a small number (7%) of parents reported negative treatment or comments related to being lesbian, gay, bisexual, transgender, or queer (LGBTQ) by teachers; those who reported negative treatment also felt less comfortable talking to school personnel about their families (Kosciw & Diaz, 2008). Perhaps these low numbers reflect same-sex parents' efforts to place their children in diverse, affirming school settings, when possible (e.g., when they have sufficient resources); indeed, same-sex parents have been found to consider the school's gay-friendliness and overall approach to diversity in choosing schools (Goldberg & Smith, 2014; Mercier & Harold, 2003). To the extent that they are able to place their children in affirming environments, this environment may result in few homophobic incidents and generally strong family-school relationships.

Parent gender

The sexual orientation of parents may also moderate differences in engagement based on gender. Indeed, the literature on parents' school-based engagement has historically focused on heterosexual mothers. Thus, the finding that mothers are more involved in children's education appears to be related to, and a reflection of, traditional beliefs about gender roles and gender-based patterns of power in society (Hoover-Dempsey & Sandler, 1997; Palm & Fagan, 2008). Whether this finding holds up in same-sex parent families—who tend to be more egalitarian in terms of parental roles (Goldberg, 2010)—is unknown. In a review of the parenting literature, Biblarz and Stacey (2010) found that parent gender was stronger predictor of parenting than sexual orientation, suggesting that gender may emerge as a

significant predictor of parental engagement regardless of parental sexual orientation. It is also possible that gender interacts with sexual orientation, such that, for example, sexual minority mothers and heterosexual mothers may be similarly involved, but sexual minority fathers may be more involved than heterosexual fathers.

The School Context

In considering parents' relationships with their children's schools, it is important to consider the dynamic nature of the parent-school relationship, as well as the multiple intersecting contexts within the broader school community (Bronfenbrenner & Morris, 1998; Mercier & Harold, 2003). In particular we examine parents' perceptions of their interactions with different aspects of the school community. Thus, we consider parents' perceptions of how schools relate to them (i.e., what type of contact parents receive from schools about their child) as well as their perceptions of and interactions with other parents at their children's schools (i.e., the broader school context). Finally, we consider whether parents' perceptions of the school's integration of, and sensitivity to, cultural and adoption issues, are related to school engagement.

Perceptions of school initiated contact

Feuerstein (2000) observed that many studies of parents' school engagement have been ineffective in providing a clear understanding of what factors encourage parents to be engaged in their children's education. He suggested that one reason for this is that scholars "overemphasize static, individual-level variables like SES, ethnicity, and family structure" (p. 29). These types of variables "do not acknowledge the dynamic aspects of the parent-school relationship and are not easily influenced by educational or social policy" (p. 29). Thus, school-related factors, such as school efforts to contact parents, may be more important to explore as contributors to parents' school engagement. For example, Feuerstein found that parents' involvement in the school was significantly influenced by level of school contact, such that parents who reported more school contact about their children's grades and behavior volunteered more.

Few studies differentiate between school contact about "positive" versus "negative" issues. One exception is a study of school-initiated contact by Rimm-Kaufman and Pianta (1999), which differentiated among topics about which contact was being made (academic problems, behavior problems, health, positive issues, and family support) and found that kindergarten families received more contact about negative topics (e.g., behavior and academic problems) than preschool families, which in part reflected a general trend towards increased school contact between preschool to kindergarten. Unknown is how contact about negative versus positive topics may be differentially related to parent engagement. Perhaps contact about negative topics negatively influences parent-teacher relationships and school satisfaction but positively influences involvement, whereas contact about positive or neutral topics is positively related to all three dimensions of engagement (involvement, relationships, and satisfaction).

Little research has examined same-sex parents' experiences of being contacted by their children's schools. One exception is the GLSEN study conducted by Kosciw and Diaz

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(2008), which found that same-sex parents reported more contact about both positive or neutrally charged issues (e.g., volunteer opportunities; 58% vs. 40%) and negatively charged issues (e.g., their child's behavior problems: 21% vs. 12%), compared to a national sample. The authors, however, did not examine whether these different types of contact were related to parents' school involvement.

Acceptance by other parents at the school

Feeling accepted by and connected to other parents, as well as socializing with other parents, may affect parent engagement, such that parents who form ties with other parents feel more connected to and are more involved at their children's schools (Malsch et al., 2011). By extension, parents who feel disconnected from their community in general and the other parents at their children's schools may be less engaged (Hindman, Miller, Froyen, & Skibbe, 2012; McKay, Atkins, Hawkins, Brown, & Lynn, 2003), especially in minority (e.g., racial minority) communities (Simoni & Perez, 1995; Turney & Kao, 2009). The absence of a community of other parents who share a central feature of one's identity can inhibit a sense of connection to the school (Hindman et al.); in turn, parents who feel excluded by the other parents at the school may detach from the school community (Levine-Rasky, 2003).

Some scholars (e.g., Durand, 2011) have conceptualized parent–parent relationships as a form of social capital that affects parents' school engagement. In a study of Latino families, Durand found that stronger communication with other parents helped to increase parents' school involvement, thus creating a possible avenue through which Latino parents might develop a collective voice within the school. Not all studies, however, find that perceived social support from parents is related to school involvement. For example, in a study of African American parents, support from other parents was unrelated to school involvement (McKay et al., 2003).

Same-sex parents' perceptions of acceptance and inclusion by other parents have rarely been examined. One exception is the GLSEN survey (Kosciw & Diaz, 2008), which found that a quarter of the same-sex parents surveyed reported mistreatment (e.g., being whispered about or ignored) by other parents at school. No research has systematically examined adoptive parents' sense of connection to other parents, although qualitative work has reported feelings of alienation from biological parents in this population (Goldberg, Downing, & Richardson, 2009; Miall, 1987). Unknown is how perceived connection to other parents is related to same-sex and adoptive parents' school engagement (i.e., their involvement, relationships, and satisfaction).

Perceptions of schools' sensitivity to diversity

Misinformation and stigma related to adoption are still pervasive in the broader society (Goldberg et al., 2009; Miall, 1987) and may trickle down into the attitudes and practices of school personnel. Teachers, for example, may fail to attend to the multiple dimensions of difference that may impinge upon the identity or experiences of adopted children (Enge, 1999). They may also neglect to discuss racial or family diversity in the classroom, perhaps because they believe that young children are too young to understand these issues (Husband, 2012), despite evidence to the contrary (Park, 2011). Thus, from the perspective of adoptive

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parents, their children's schools' inclusiveness of adoptive, racial, and cultural issues may be salient and have implications for parents' level of involvement in the school, their relationships with teachers, and their overall assessment of and satisfaction with the school.

Little research has examined adoptive parents' perceptions of teachers' sensitivity to issues of adoption, culture, and race. One exception is a study by Nowak-Fabrykowski, Helinski, and Buchstein (2009), which surveyed 23 heterosexual foster parents. They found that most parents reported their children's teachers and classrooms did not have materials related to adoption and felt that schools could be doing more than they were to incorporate the experiences of adopted individuals and their families into their curricula. In a study of 11 White heterosexual parents with adopted Chinese daughters (ranging in age from 2 to 9 years old), Tan and Nakkula (2004) observed that parents often felt that their children's schools could be more culturally sensitive.

Some research suggests that same-sex parents may be particularly attuned to schools' sensitivity to cultural, racial, and family diversity. Mercier and Harold (2003) interviewed 15 female same-sex parent families with children age 6 months to 18 years and found that parents emphasized the importance of sending their children to schools that valued diversity, as they believed that "schools that value diversity of any type are more likely to respond well to lesbian-parent families" (p. 39). Goldberg and Smith (2014) found that racial diversity in particular mattered to same-sex parents when choosing preschools: Female and male same-sex adoptive parents were more likely to consider the racial diversity of the school than heterosexual adoptive parents, regardless of their child's race. However, this study also found that heterosexual parents perceived higher levels of adoption stigma in their children's preschools than same-sex parents. The authors suggest that this differential rate of perceived adoption stigma may reflect their greater sensitivity to this form of bias, compared to same-sex parents, who encounter multiple forms of stigma and who thus may be less sensitive to adoption-related insensitivities or more likely to attribute bias to their sexual orientation.

None of the above studies examined how perceived inclusiveness regarding culture, adoption, and diversity are related to parental engagement. Also, the literature is conflicting with regard to whether same-sex parents and heterosexual parents are differentially attuned to or affected by such perceptions, and the implications of such perceptions for school engagement.

Research Questions and Hypotheses

Based on the previously described literature, we pose the following research questions and hypotheses regarding same-sex and heterosexual adoptive parents' school engagement:

- 1. Parents' School-Based Involvement:** We expect that same-sex adoptive parents will be more involved than heterosexual adoptive parents (Hypothesis 1A); women will be more involved than men, regardless of family type (Hypothesis 1B); parents who report more school contact about both positive or neutral topics and negative topics will be more involved, regardless of family type (Hypothesis 1C); parents who report greater acceptance by other parents, and who socialize with other

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parents, will be more involved, regardless of family type (Hypothesis 1D); and parents who perceive the school as more culturally sensitive and less stigmatizing of adoption will be more involved, regardless of family type (Hypothesis 1E).

2. **Parents' Relationships With Teachers:** We expect that parents who report more school contact about positive or neutral topics will report better parent–teacher relationships, and parents who report more contact about negative topics will report poorer relationships, regardless of family type (Hypothesis 2A). Parents who view the school as more culturally sensitive and less stigmatizing of adoption will report better relationships, regardless of family type (Hypothesis 2B).
3. **School Satisfaction:** We expect that parents who report more school contact about positive or neutral topics will be more satisfied with the school, whereas parents who report more contact about negative topics will be less satisfied, regardless of family type (Hypothesis 3A). Parents who perceive their schools as more culturally sensitive and less stigmatizing of adoption will be more satisfied, regardless of family type (Hypothesis 3B).

We do not have hypotheses about how (a) sexual orientation, (b) perceived acceptance by parents, and (c) socializing with parents, may be related to parent–teacher relationships or school satisfaction. As there is not sufficient literature in these areas to speculate about such associations, our examination of these associations was exploratory. We also conducted a series of exploratory interactions. We examined the interaction between sexual orientation and gender in predicting involvement, parent–teacher relationships, and school satisfaction, but we did not have specific hypotheses about the direction of these associations. We also conducted exploratory interactions between (a) cultural sensitivity and sexual orientation and (b) adoption stigma and sexual orientation, out of interest in whether diversity-related variables differentially affect school engagement for same-sex and heterosexual adoptive parents.

Method

Participants

Data were taken from a longitudinal study of adoptive-parent families, conducted by the first author (e.g., Goldberg et al., 2009; Goldberg, Smith, & Kashy, 2010). All 103 couples had adopted their first child 5 years earlier. Participants were included in the current study if their adopted child was in kindergarten.

We used data from members of 35 female same-sex couples, 28 male same-sex couples, and 40 heterosexual couples—all of whom who had adopted their first child 5 years earlier—to examine predictors of parents' school engagement. Descriptive data from couples broken down by sexual orientation and gender appear in Table 1. Multilevel linear modeling (MLM, in which parents were nested within couples) revealed that parents' average salaries differed significantly by gender but not by sexual orientation or the interaction between gender and sexual orientation. Specifically, mean annual personal income differed by gender, $F(1, 173) = 16.78, p < .001$, with men reporting higher personal incomes ($M = \$93,969, SE = \$6,470$) than women ($M = \$56,808, SE = \$5,688$). (For all analyses of demographic characteristics

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across groups, unless otherwise reported, the a priori alpha level needed for statistical significance was .05.) The sample as a whole is more affluent than national census-derived estimates for same-sex and heterosexual adoptive families, which indicate that the average household incomes for same-sex couples and heterosexual married couples with adopted children are \$102,474 and \$81,900, respectively (Gates, Badgett, Macomber, & Chambers, 2007). Across both same-sex and heterosexual adoptive families, there were also significant gender differences in work hours, $F(1, 163) = 9.91, p = .002$, such that men worked more hours per week ($M = 39.24, SE = 1.64$) than women ($M = 31.57, SE = 1.46$). The sample as a whole is well-educated, $M = 4.40 (SE = 0.11)$, where 4 = bachelor's degree and 5 = master's degree. MLM revealed no differences in education level by gender or sexual orientation or their interaction.

Across same-sex and heterosexual adoptive families, the adoptive parents were mostly White (89%). Their adoptive children, in contrast, were mostly of color (i.e., non-White, including biracial children); 61% of couples adopted children of color. The racial breakdown of parents versus children in this sample is similar to prior studies of same-sex and heterosexual adoptive families (see Farr, Forssell, & Patterson, 2010). Fifty-two percent of couples adopted boys, and 48% adopted girls. Chi square tests of independence showed that the distribution of parent race did not differ by gender, sexual orientation, or their interaction; and, child race and child gender did not differ by family type (female same-sex, male same-sex, and heterosexual).

Children's average age was 5.56 years, or 66.75 months ($SD = 7.25$ months); an analysis of variance (ANOVA) showed that child age did not differ by family type. Fifty-one percent of children attended public school, and 49% of children attended private schools. Chi square tests of independence showed that school type did not differ by family type.

Measures

Each partner within every couple was asked to complete the following measures separately (i.e., in isolation) from their partner.

Outcome variable—There were three outcome variables employed in this study.

Dimensions of parent involvement: School-based involvement, parent-teacher relationships, and school satisfaction: Three dimensions of parent involvement were assessed using the widely-used Parent-Teacher Involvement Questionnaire (PTIQ; Conduct Problems Prevention Research Group, 1995), which contains three subscales measuring the following: (a) the parent's involvement in school, (b) the quality of the parent-teacher relationship; and (c) the parent's satisfaction with the school. Parents responded to items using a 5-point scale, where 0 = *never/not at all*; 1 = *once or twice a year/a little*; 2 = *almost every month/some*; 3 = *almost every week/a lot*; and 4 = *more than once per week/a great deal*. The first subscale, Parent Involvement, contained 9 items (e.g., "You volunteer at your child's school"). One item ("You have attended PTA meetings") was dropped because it was not deemed applicable to kindergarten-age children. The second subscale, Parent-Teacher Relationship, contained 7 items (e.g., "You think your child's teacher is interested

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in getting to know you”). The third subscale, School Satisfaction, contained 4 items (e.g., “Your child’s school is a good place for your child to be”).

The alpha values for the PTIQ three scales are as follows: .75 for Parent Involvement, .88 for Parent–Teacher Relationship, and .82 for School Satisfaction. The scales are intercorrelated (Parent Involvement & Parent–Teacher Relationship, .47; Parent Involvement & School Satisfaction, .34; and Parent–Teacher Relationship & School Satisfaction, .56) but represent distinct constructs with different predictors. Other studies utilizing this measure have reported similar alpha values and similar scale correlations (El Nokali, Bachman, & Votruba-Drzal, 2010; Kohl, Lengua, & McMahon, 2000).

Predictor variables—There were nine predictor variables employed in this study.

Sexual orientation: Sexual orientation refers to whether participants were in same-sex or heterosexual relationships. We examined differences by parent sexual orientation by creating a dummy variable where 1 = *same-sex parent* and 0 = *heterosexual parent*.

Parent gender: Parent gender refers to the self-reported gender of each partner in each couple. We examined differences by parent gender by creating a dummy variable where 1 = *female* and 0 = *male*.

Contact by school: Parents were asked to indicate the number of times their children’s school had contacted them about various issues, using a four point scale: 1 = *none (never)*; 2 = *once or twice (infrequently)*; 3 = *three or four times (sometimes)*; or 4 = *five or more times (a lot)*. This scale was created and used by Kosciw and Diaz (2008) in the GLSEN survey. The issues were addressed in the following items: (1) Your child's poor performance in school, (2) Your child's problem behavior in school, (3) Your child was having problems with other students, (4) Your child's poor attendance record at school, (5) Your child's school program for this year, (6) Your child's good behavior in school, (7) Participating in school fund-raising activities or doing volunteer work, (8) Information on how to help your child at home with specific skills or homework, (9) Obtaining information for school records, and (10) Your child's future education. Items 1–4 were summed to form a measure of “negative” contact by the school, and items 5–10 were summed to form a measure of “positive” (or “neutral”) contact by the school (Kosciw & Diaz). Both variables (contact about negative topics and contact about positive or neutral topics) were then mean-centered. We do not report alphas for either of these indices, as they are participants’ reports of school contacts about specific topics and thus do not represent unitary constructs.

Perceived acceptance by other parents at the school: To measure parents’ perceptions of being accepted and included by other parents at their children’s schools, we adapted a measure by Goodenow (1993), whose original measure assessed adolescents’ subjective connection to peers. Thus, the original five items assessed how connected the person feels to peers at their school, and we adapted these so that they assess parents’ perceptions of acceptance and inclusion by the other parents at their children’s school. Parents responded to five items (e.g., “Other parents at this school are friendly to me” and “Other parents at this school are not interested in people like me” [reverse scored]) on a 5-point scale (1 = *not at*

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all true; 5 = *very true*). Goodenow (1993) reported construct and content validity evidence and good internal consistency for the original measure ($\alpha = .88$) from a sample of 755 adolescents. In our study, the alpha value for the scale (which was mean-centered) was .89.

Socialization with other parents at child's school: Parents were asked whether they socialized with other parents at their children's schools (1 = *yes*, 0 = *no*).

Cultural sensitivity: To measure parents' perceptions of their children's schools' cultural consciousness, we used the cultural sensitivity subscale (4 items) from the School Receptivity Questionnaire (Sanders, 2008), which was developed to assess various dimensions of school receptivity. Items such as "My teacher makes culturally sensitive statements" and "My child's teacher is well-trained to deal with parents and students from different ethnic and racial backgrounds" were answered on a 4-point scale (1 = *strongly disagree* to 4 = *strongly agree*). Sanders reported construct validity evidence and acceptable internal consistency for the subscale ($\alpha = .80$) from a sample of 339 parents of school-aged children. In our study, the alpha value for this subscale (which was mean-centered) was .79.

Perceived adoption stigma: Perceived school stigma due to adoptive status was assessed using an 8-item measure (Goldberg & Smith, 2014), the development of which was informed by empirical and popular press literature (Child Welfare Information Gateway, 2012; Kosciw & Diaz, 2008). The measure assesses perceived mistreatment and exclusion by teachers, school personnel, and other parents, related to the child's adoptive status. Parents responded to the following six items using a 5-point scale (1 = *not at all true*, 5 = *very true*): (1) I have felt that my parenting skills were questioned because I am an adoptive parent, (2) I have felt mistreated by school staff because I am an adoptive parent, (3) I have felt that staff members/school personnel treat my child differently because he/she is adopted, (4) My child's teacher uses language that acknowledges adoptive families (reverse scored), (5) My child's teacher sensitively handles assignments that could be hurtful to adoptive families (e.g., family trees) (reverse scored), and (6) My child's school uses forms that allow families to identify themselves in the way that they choose (reverse scored). In addition, parents responded to the following two items using a different 5-point scale (1 = *not at all excluded*, 5 = *very excluded*): (1) To what degree do you feel excluded from your child's school on the basis of your status as an adoptive family? and (2) To what degree do you feel excluded by the parents of your children's peers on the basis of your status as an adoptive family? Goldberg and Smith reported acceptable internal consistency for the scale ($\alpha = .71$) with a sample of 210 lesbian, gay, and heterosexual parents of preschool-aged children. In this sample, the alpha value for the measure (which was mean-centered) was .72.

Child behavior problems: The Child Behavior Checklist (CBCL/1.5-5; Achenbach & Rescorla, 2000) designed for children 1.5-5 years, consists of three domains: Internalizing Problems, Externalizing Problems, and Total Problems. We used the Externalizing Problems score as a predictor variable in follow-up analyses. Parents responded to 100 items regarding how often their child displayed various problems using a 3-point scale (0 = *not true*; 1 = *somewhat/sometimes true*; 2 = *very/often true*). We transformed the raw scores into standard

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T scores, which were mean-centered. Higher scores represent more symptoms. In the non-referred standardization sample of the CBCL/1.5-5, the mean *T* score for parent reports was 50.20 (*SD* = 9.90) for the Externalizing Problems scale, and the mean *T* score for the clinically referred sample of the CBCL/1.5-5 was 61.70 (*SD* = 11.10) for the Externalizing Problems scale (Achenbach & Rescorla). In our sample, the mean *T* score was 49.19 (*SD* = 10.75). The CBCL/1.5-5 has demonstrated good internal consistency and test-retest reliability in heterosexual and same-sex parent samples (Farr et al., 2010). The alpha value was .90 in the current sample.

Control variables—There were five control variables employed in this study.

Education: Parents were asked to indicate where their level of education fell on a 6-point scale, where 1 = *less than high school education*, 2 = *high school diploma*, 3 = *associate's degree or some college*, 4 = *bachelor's degree*, 5 = *master's degree*, and 6 = *Ph.D./M.D./JD*. We included level of education (mean-centered) as a control variable, in that greater access to education and income contributes to a sense of investment in and entitlement to education by parents; whereas parents with fewer educational and financial resources may feel alienated by their children's schools and teachers (Machen, Wilson, & Notar, 2005). Indeed, research is fairly consistent in finding that more educated parents tend to be more involved in children's school lives (Hindman et al., 2012; Waanders et al., 2007) but do not necessarily have stronger relationships with teachers (Waanders et al.).

Personal income: Each parent was asked to report on his or her annual salary. We used the parents' estimated annual salary (divided by 10,000, and mean-centered) as a control variable given its association with parents' school involvement and engagement, whereby, for example, parents with less income are more likely to be involved in volunteering and the like (Arnold, Zeljo, Doctoroff, & Ortiz, 2008; Durand, 2011).

Work hours: Parents' work hours per week (mean-centered) were included as a control variable, as parents' work hours and schedule may inhibit school involvement and undermine parent-teacher relationships (Malsch et al., 2011). Both working more hours (Weiss et al., 2003) and having interfering work schedules (Hindman et al., 2012) have been linked to less school involvement, and Fantuzzo, Perry, and Childs (2006) found that parents who worked full time were less satisfied with their children's educational programs than those who worked less than full time.

Child age: Parents were asked to indicate the age of their child at the time of the interview. We included child age in months (mean-centered) as a control variable. We suspected that parents of younger children (or children in their first year of kindergarten) might be more involved than parents of older children, in light of research showing that parents may be especially involved during the initial transition to kindergarten (McIntyre et al., 2007).

School type: Parents were asked to indicate whether their child attended a public or private preschool. School type was dummy coded such that 1 = *public* and 0 = *private school*. We controlled for type of school based on research suggesting that inasmuch as parents who send their children to private school chose that school (i.e., over public school and possibly

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other private schools), they may in turn be more satisfied with the school (Warner, 2010) and more engaged in the schools (Goldring & Philips, 2008). Notably, some research (e.g., Hashmi & Akhter, 2013) has found few differences in parent involvement as a function of school type.

Procedures

Participants in this study were originally recruited during the pre-adoptive period (while couples were waiting for a child). Inclusion criteria were (a) couples must be adopting their first child and (b) both partners must be becoming parents for the first time. Adoption agencies throughout the United States were asked to provide study information to clients who had not yet adopted; this information was typically in the form of a brochure that invited clients to participate in a study of the transition to adoptive parenthood. We explicitly invited both same-sex and heterosexual couples to participate, because a goal of the study was to understand how same-sex couples, specifically, experienced the transition to adoptive parenthood. Toward this end, United States census data were utilized to identify states with a high percentage of same-sex couples (Gates & Ost, 2004), and effort was made to contact agencies in those states. We recruited both heterosexual and same-sex couples through these agencies, in an effort to match couples roughly on geographic status and financial resources. Over 30 agencies provided information to their clients; interested couples were asked to contact the principal investigator for details. Because some same-sex couples may not be “out” to agencies about their sexual orientation, several national LGBTQ organizations also assisted with recruitment. For example, the Human Rights Campaign posted a description of the study on their Family-Net listserv, which is sent to 15,000 people per month.

Participants in the study completed in-depth questionnaires before the adoptive placement, 3 months post-placement, 1 year post-placement, 2 years post-placement, 3 years post-placement, and 5 years post-adoptive placement. Data for the current study come from the 5 years post-adoptive placement assessment. Five years post-placement, parents were contacted and asked to complete an in-depth set of questionnaires, including closed- and open-ended items, which focused on their experiences with their children’s kindergartens. Both partners in each couple were asked to complete the packet. Of the 47 eligible heterosexual adoptive couples who were contacted, 7 declined or did not respond (15%); of the 37 eligible female adoptive couples who were contacted, 2 declined (5%); and of the 30 eligible male adoptive couples who were contacted, 2 declined (7%).

Analytic Strategy

Data were missing for 10 persons in the 103 couples: 2 sexual minority women, 2 sexual minority men, 5 heterosexual men, and 1 heterosexual woman. For all analyses, there were 196 persons nested in 103 couples. Because we examined partners nested in couples, it was necessary to use a method that would account for the within-couple correlations in the outcome scores. Multilevel modeling (MLM) permits examination of the effects of individual and dyad level variables, accounts for the extent of the shared variance, and provides accurate standard errors for testing the regression coefficients relating predictor variables to outcome scores (Kenny, Kashy, & Cook, 2006). MLM adjusts the error variance

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for the interdependence of partner outcomes within the same dyad, which results in more accurate standard errors and associated hypothesis tests. Another methodological challenge is introduced in the study of dyads when there is no meaningful way to differentiate the two dyad members (e.g., male and female). In this case, dyad members are considered to be exchangeable or interchangeable (Kenny et al.). The multilevel models tested were two-level random intercept models such that partners (Level 1) were nested in couples (Level 2; see Smith, Sayer, & Goldberg, 2013). To deal with intracouple differences, the Level-1 model was a within-couples model that used information from both members of the couple to define one parameter—an intercept, or average score—for each couple. This intercept is a random variable that is treated as an outcome variable at Level 2. Predictor variables that differed within couples (gender, income, work hours, education, acceptance by parents, socialization with parents, cultural sensitivity, and adoption stigma) were entered at Level 1. Predictor variables that varied between couples (sexual orientation, child age, school type) were entered at Level 2. Continuous predictor variables were grand mean-centered and dichotomous variables were dummy coded (0 and 1). Each variable was tested alone and in combination with other variables to test for collinearity. Interactions were created by multiplying mean-centered continuous variables and dummy-coded dichotomous variables. For each of the outcome variables, we estimated a final set of more parsimonious models in which we trimmed nonsignificant predictor variables and included only predictor variables that were approaching statistical significance ($p < .10$) in either the main effects model or the model with interactions. Findings with a probability value $< .05$ are interpreted.

Results

In the following sections, we present (a) descriptive findings; (b) findings from our multilevel models predicting parent involvement, parent–teacher relationships, and school satisfaction; and (c) findings from our follow-up analyses.

Descriptive Findings

Descriptive statistics for all continuous and dichotomous predictor variables, control variables, and the continuous outcome variables, broken down by sexual orientation and gender, are in Table 1. As the Table shows, the sample as a whole reported relatively low levels of negative contact and moderate levels of positive contact by teachers. They also reported relatively high levels of perceived acceptance by, and moderate levels of socialization with, other parents. Further, relatively high levels of cultural sensitivity, and relatively low levels of perceived adoption stigma, were reported. Regarding the outcomes, parents reported moderate levels of involvement and relatively high levels of parent-teacher relationship quality and school satisfaction.

For individual-level variables (e.g., income and work hours), we used MLM to examine differences by sexual orientation, gender, and their interaction. As reported in the Participants section of the Method, mean annual income differed by gender, such that men reported higher personal incomes than women; and, weekly work hours differed by gender, such that men reported working more hours per week than women.

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Regarding the predictor variables, parents' reports of positive contact by teachers differed by sexual orientation, $F(1, 102) = 5.07, p = .027$, with same-sex adoptive parents reporting more contact ($M = 13.08, SE = .36$) than heterosexual adoptive parents ($M = 11.74; SE = .47$). Regarding the outcome variables, parents' perceptions of their relationships with teachers differed by sexual orientation, $F(1, 102) = 11.82, p = .001$, with same-sex adoptive parents reporting better relationships ($M = 3.38, SE = 0.07$) than heterosexual adoptive parents ($M = 3.01, SE = 0.09$). Parents' school satisfaction differed by gender, $F(1, 170) = 2.75, p = .041$, with men reporting greater satisfaction ($M = 3.21, SE = 0.06$) than women ($M = 3.06, SE = 0.05$).

Intercorrelations among predictor and outcome variables are presented in Table 2.

Multilevel Model Predicting Parent Involvement

In the MLM model predicting parent involvement at school, parent sexual orientation, parent gender, positive contact by the school, negative contact by the school, acceptance by other parents, socialization with other parents, school cultural sensitivity, and school adoption stigma were entered as predictor variables (Table 3). In addition, the following control variables were included: child age, school type, parent income, parent work hours, and parent education. Our hypotheses were partially supported. In this main effects model, there was, consistent with Hypothesis 1C, a significant effect of positive school contact on parent involvement, $\beta = .04, SE = .01, t(152) = 3.50, p = .001$, such that parents who reported more contact by the school about positive or neutral topics reported more involvement, regardless of family type. Consistent with Hypothesis 1D, perceived acceptance by other parents emerged as significant, $\beta = .13, SE = .06, t(154) = 1.98, p = .049$: Parents who felt more accepted by other parents reported being more involved, regardless of family type. Further, consistent with Hypothesis 1D, there was a significant effect of socializing with other parents at the school, $\beta = .18, SE = .09, t(150) = 2.08, p = .040$: Participants who reported socializing with other parents reported being more involved, regardless of family type.

Contrary to expectation, sexual orientation, gender, negative contact, perceived cultural sensitivity, and perceived adoption stigma were unrelated to involvement. Of the control variables, child age, school type, income, work hours, and education were unrelated to involvement.

Next, we tested the interactions between sexual orientation and gender, sexual orientation and cultural sensitivity, and sexual orientation and adoption stigma (Table 3). In the model with interactions, the effect of positive school contact remained significant, $\beta = .04, SE = .01, t(152) = 3.78, p = .001$, as did the effects of perceived acceptance by other parents, $\beta = .14, SE = .06, t(150) = 2.15, p = .033$, and socializing with other parents, $\beta = .22, SE = .09, t(149) = 2.46, p = .014$. The interaction between adoption stigma and sexual orientation emerged as significant, $\beta = .51, SE = .21, t(152) = 2.46, p = .015$. Examination of this interaction (Figure 1) revealed that heterosexual adoptive parents who perceived high levels of adoption stigma reported being less involved than those who perceived low levels of stigma; perceptions of stigma had the opposite effect on the involvement of same-sex

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adoptive parents. Among same-sex adoptive parents, high perceived stigma was related to more involvement, whereas low perceived stigma was related to less involvement.

In our final trimmed model, we only included predictor variables with statistical significance levels of $p < .10$ in the main effects model or the model with interactions. In this model, all previously significant variables remained significant. In addition, child age ($\beta = -.004$, $SE = .001$, $t(93) = -2.42$, $p = .018$), work hours ($\beta = -.006$, $SE = .002$, $t(147) = -2.84$, $p = .005$), and cultural sensitivity ($\beta = .19$, $SE = .07$, $t(164) = 2.52$, $p = .012$), emerged as significant in the trimmed model, such that parents of younger children, parents who worked fewer hours, and parents who perceived their children's schools as more culturally sensitive, reported greater involvement, regardless of family type.

Multilevel Model Predicting Parent–Teacher Relationships

In the MLM model predicting parent–teacher relationships, the same set of predictor and control variables were included (Table 3). Few of our hypotheses regarding this outcome were supported. In this main effects model, sexual orientation was significant, $\beta = .23$, $SE = .09$, $t(95) = 2.62$, $p = .010$, such that unexpectedly, same-sex adoptive parents reported better relationships with their children's teachers than heterosexual adoptive parents. Also unexpected was the finding that negative school contact was positively related to parents' relationships with teachers, $\beta = .06$, $SE = .03$, $t(134) = 2.25$, $p = .026$, such that parents who reported more contact by the school about negative topics reported more positive relationships with teachers, regardless of family type. Perceived acceptance by other parents was significant, $\beta = .27$, $SE = .08$, $t(155) = 3.42$, $p = .001$, such that parents who felt more accepted also reported better relationships with teachers, regardless of family type. Consistent with Hypothesis 2B, perceived cultural sensitivity was positively related to parent–teacher relationship quality, $\beta = .51$, $SE = .09$, $t(155) = 5.79$, $p < .001$, such that parents who viewed the schools as more culturally sensitive reported better relationships with teachers, regardless of family type. Contrary to expectation, positive school contact and adoption stigma were not related to parent-child relationships. Also, parent gender, child age, school type, socialization with parents, income, work hours, and education, were unrelated to the outcome.

Next, we tested the same set of interactions as with parents' school involvement. None of them emerged as significant. In the trimmed model, all previously significant variables remained significant. Further, the interaction between cultural sensitivity and sexual orientation emerged as significant, $\beta = -.42$, $SE = .15$, $t(154) = -2.84$, $p = .005$. Examination of this interaction (Figure 2) revealed that perceived cultural sensitivity mattered more to heterosexual adoptive parents' reported relationships with teachers. Heterosexual adoptive parents who perceived high levels of cultural sensitivity in their children's schools reported better relationships with teacher than those who perceived low levels of sensitivity; whereas the effect of perceived cultural sensitivity on same-sex adoptive parents' reports of their relationships with teachers was negligible.

Multilevel Model Predicting School Satisfaction

In the MLM model predicting school satisfaction, the same set of predictor and control variables were included (Table 3). Our hypotheses were partially supported. Namely, consistent with Hypothesis 3A, positive school contact was positively related to school satisfaction, $\beta = .02$, $SE = .009$, $t(133) = 2.12$, $p = .036$: Parents who reported higher levels of contact by the school about positive or neutral topics were more satisfied, regardless of family type. Additionally, consistent with Hypothesis 3B, perceived cultural sensitivity was positively related to school satisfaction, $\beta = .36$, $SE = .06$, $t(130) = 5.96$, $p < .001$, such that parents who perceived the school as more culturally sensitive reported greater satisfaction, regardless of family type. Regarding the control variables, gender emerged as significant, $\beta = -.16$, $SE = .07$, $t(147) = 2.49$, $p = .014$, such that male parents reported greater satisfaction with their children's schools than female parents, regardless of family type. Contrary to expectation, adoption stigma was unrelated to satisfaction. The following variables were also unrelated to satisfaction: sexual orientation, negative school contact, acceptance by parents, socialization with other parents, child age, school type, income, work hours, and education.

Next, we tested the same set of interactions, but none emerged as significant. Finally, in the trimmed model for school satisfaction, all previously significant variables remained significant. Further, consistent with Hypothesis 3a, negative contact emerged as significant in the final trimmed model, $\beta = -.04$, $SE = .02$, $t(168) = -2.69$, $p = .008$, such that parents who reported higher levels of contact about negative topics reported feeling less satisfied with their children's schools, regardless of family type (Table 3).

Follow-up Analyses

Our unexpected finding that more negative contact from the school was related to more positive parent-teacher relationships prompted us to wonder whether parents who are struggling with their children's behaviors at home might appreciate hearing from their children's teachers about the challenges that they are experiencing at school. That is, they may welcome such contact if it is delivered in a supportive way; in turn, such contact may stimulate dialogue and collaboration which fosters closer relationships with teachers. Thus, we tested the interaction between child externalizing problems, measured by the Child Behavior Checklist (Achenbach & Rescorla, 2000) and negative school contact, with the expectation that parents who perceived higher levels of behavioral problems, who also reported negative contact, might report more positive relationships with teachers. We also tested this interaction in relation to the other two outcome variables for exploratory purposes. Neither child behavior, $\beta = -.005$, $SE = .004$, $t(136) = -1.08$, $p = .29$, nor the child behavior \times negative school contact interaction, $\beta = .002$, $SE = .002$, $t(128) = .72$, $p = .47$, predicted involvement. Likewise, neither child behavior, $\beta = -.004$, $SE = .004$, $t(125) = -.84$, $p = .40$, nor its interaction with negative school contact, $\beta = -.002$, $SE = .002$, $t(120) = -.67$, $p = .50$, predicted parent-teacher relationships. Finally, neither child behavior, $\beta = -.004$, $SE = .004$, $t(136) = -1.00$, $p = .92$, nor its interaction with negative school contact, $\beta = .003$, $SE = .002$, $t(140) = 1.65$, $p = .11$, significantly predicted school satisfaction.

Discussion

This study is the first to examine the school-related experiences of same-sex and heterosexual adoptive parents with kindergarten-age children. We examined multiple aspects of the parent and school context in relation to parents' school engagement. Our findings hold implications for future research as well as for early childhood educators and school personnel, such as school psychologists, who wish to cultivate learning environments that appeal to and meet the needs of diverse families.

The frequency, nature, and type of communication that schools use with parents has the capacity to shape parents' school-based involvement, their relationships with teachers, and their overall assessment of the school (Hornby, 2011). In the current study, we observed an interesting set of findings related to school contact and parental engagement. Parents who reported higher levels of positive or neutral school contact were more involved and more satisfied with their children's schools, a finding that is consistent with prior work (Feuerstein, 2000). Hearing positive feedback may encourage parents to contribute to their children's school environment and to view their children's school as a good place for their child to be—although, of course, the opposite may also be true: that is, parents who are more involved may be regarded more positively by teachers, and thus receive more positive feedback about their children.

Surprisingly, parents who reported more negative school contact reported more positive relationships with teachers. We suspected that parents who are struggling with their children's behaviors and functioning at home might appreciate contact about their children's negative behavior, thus stimulating greater dialogue and even closeness between parents and teachers. To examine this possibility, we tested an interaction between behavior problems and negative school contact, which was not significant. Thus, perhaps regardless of the actual level of behavior problems that they personally perceive in their children, adoptive parents are relatively open to discussing such issues if teachers raise them. That is, adoptive parents may be particularly vigilant about the potential for adjustment issues in their children (such as those that stem from attachment or loss), particularly as they grow older (Nickman et al., 2005). In turn, they may be particularly primed to discussing issues related to their children's emotional and behavioral adaptation.

Another important aspect of the school context concerns parents' relationships with other parents. Limited research has examined how same-sex or adoptive parents' relationships with other parents impact their school engagement (Kosciw & Diaz, 2008). As expected, we found that when the adoptive parents in the sample felt accepted by other parents, they reported greater involvement at their children's schools. Perceived acceptance was also related to reports of better relationships with teachers. Thus, it appears that a sense of perceived inclusion may be important to multiple aspects of school engagement—and, likewise, that adoptive parents who feel alienated and excluded by other parents are at risk for disconnection from schools and teachers. Other parents are a key aspect of the school's atmosphere (McKay et al., 2003), and may be especially important to members of minority groups (e.g., adoptive and same-sex parents) in terms of their sense of belonging and engagement (Simoni & Perez, 1995; Turney & Kao, 2009). Of note is that feeling accepted

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by other parents was unrelated to school satisfaction. This lack of significant relationship makes sense, conceptually, since our measure of parents' satisfaction is concerned with the parents' assessment of whether the school is a good place for their child; in turn, their personal sense of connection to parents should be less important to their assessment of the school's worth and fit for their child. Of course, as the data are cross-sectional, it is important to consider alternative explanations. Parents who are more involved at may report greater inclusion by other parents because they have had more opportunities to get to know those parents (e.g., via volunteering).

A construct that is related to but distinct from that of perceived acceptance by other parents is socialization with other parents. That is, parents' subjective sense of being "liked" and "heard" is distinct from interacting with other parents outside of school. The latter represents a behavioral index of socialization that may come in the form of play dates, which directly involve the child. Parent socialization was also related to parents' reported school involvement. Indeed, socializing with other families may enhance parents' sense that their child, specifically, is liked and accepted by their peers at school, thus enhancing their willingness to volunteer and attend school events. Again, it may also be that parents' school involvement fosters more opportunities for connection with other parents—including future play dates. However, given that we assessed parents' socialization with a single-item measure, this finding should be viewed with caution.

It is notable that parents' perception of the cultural sensitivity of their children's schools was the single predictor variable that was related to all three engagement outcome variables: school involvement, parent-teacher relationships, and school satisfaction. The association between perceived cultural sensitivity and parent-teacher relationships, however, depended upon parents' sexual orientation, such that cultural sensitivity mattered more for heterosexual adoptive parents' relationships than it did for same-sex adoptive parents. Perhaps other factors were simply more salient to same-sex parents, and thus had more of an influence on their relationships with teachers. For same-sex parents, the cultural sensitivity of the school may be less important or pressing than how open and affirming the school is specifically regarding sexual orientation (Goldberg & Smith, 2014).

The effect of perceived adoption stigma on parent involvement also varied as a function of sexual orientation, although it was unrelated to parents' reported relationships with teachers or school satisfaction. Heterosexual adoptive parents who perceived high levels of adoption stigma in their children's schools were less involved than those who perceived low levels of stigma, whereas high levels of perceived adoption stigma were associated with more school-based involvement for same-sex adoptive parents. Thus, just as heterosexual adoptive parents' reported relationships with teachers were negatively affected by perceiving the school as culturally insensitive, their reported involvement in school activities was negatively affected by perceiving adoption insensitivities and bias. In contrast, same-sex adoptive parents seemed to respond to perceived adoption stigma by increasing their involvement. That is, they may have been responding to perceptions of potential stigma and injustice by advocating for their child (Goldberg, 2010). Prior qualitative work, for example, suggests that same-sex parents often regard issues of teacher insensitivity and ignorance as a "call" for more education and involvement (Mercier & Harold, 2003). Our finding, then,

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provides further support for this pattern, and cautions us to avoid simplistic interpretations of high levels of parental involvement by sexual minority parents (e.g., assuming that high involvement reflect innate investment in their children's schools).

Notably, same-sex adoptive parents were not more involved in their children's schools, overall, as compared to heterosexual adoptive parents. This finding is consistent with some research, such as the study by Fedewa and Clark (2009) which found no evidence for differences in parent-school relationships by family type. However, it conflicts with the findings of the GLSEN survey of same-sex parents (Kosciw & Diaz, 2008). The GLSEN survey obtained data from same-sex parents of children who ranged in age from kindergarten to 12th grade; most children were in elementary or middle school. Thus, it is very possible that differences in parental involvement by sexual orientation do not surface until grade school, when bullying and harassment based on family structure may become more prominent (Goldberg, 2010; Ray & Gregory, 2001). Future, long-term follow-ups of the current sample can assess this possibility.

Unexpectedly, same-sex adoptive parents reported better relationships with their children's teachers than heterosexual adoptive parents. Perhaps, the higher levels of involvement that Kosciw and Diaz (2008) observed in their sample of same-sex parents of older children manifests differently in the kindergarten set; that is, same-sex parents of young children may focus their energies on building high-quality relationships with teachers as opposed to involving themselves in the school community, in the service of ensuring their child's safety and well-being.

In contrast to prior work (e.g., Hornby, 2011), women were not more involved in their children's schools than men, which may have something to do with the adoptive nature of the sample. Adoptive parents may, as a group, tend to be relatively active in the school lives of their children, as they may be on heightened alert regarding potential challenges related to attachment, loss, and learning, which could manifest at school (Nickman et al., 2005). Alternatively, the lack of gender differences in parental involvement may also be a function of the educated, affluent nature of the sample; parents with more resources have fewer constraints on their involvement (Hornby). Surprisingly, we also found that men were more satisfied with their children's schools, regardless of family type. Perhaps this gender difference in satisfaction reflects gender-based patterns in society, such that women have different or higher expectations for what schools should be doing, and thus their expectations are less easily met (Hornby).

Turning to the control variables, we found no significant relationships between parents' educational and financial resources and their reports of school involvement, relationships with teachers, or school satisfaction. The lack of significant relationship may in part be related to the fact that the current sample was relatively homogenous, and advantaged, with regard to education level and financial status; indeed, many of the studies linking education and income to parental engagement have examined low-income samples, or samples with more variability in education and income (e.g., Fantuzzo et al., 2006; Waanders et al., 2007). Research on less affluent and less educated adoptive families might find very different relationships between resources and school engagement.

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Parents' work hours had some influence on parents' school engagement. Parents who worked fewer hours reported more school-based involvement, which is consistent with some prior work (Hindman et al., 2012; Weiss et al., 2003). In general, parents who have more flexible work schedules or work fewer hours likely have more time to foster relationships with schools. Research on successful methods for engaging working parents, particularly in the context of enhancing their involvement, would be worthwhile (Hornby, 2011).

Limitations

There are several key limitations to the current study. First and foremost, the study's cross-sectional design limits our ability to draw conclusions about causality. For example, as we suggested, it is possible that parents who seek out opportunities for, and engage in, school-based activities become better acquainted with other parents at their children's schools, fostering greater perceived acceptance and inclusion. Second, our use of a single-item measure to assess socialization with other parents is a limitation. Findings related to this construct should be viewed with caution, and future work should employ an empirically validated measure of parent socialization. Third, our measure of school contact likely did not capture all potential areas about which contact might be made (e.g., child health; Rimm-Kaufman & Pianta, 1999). Fourth, our cultural sensitivity measure was very broad; future research should consider utilizing a more nuanced and multidimensional measure that taps racial, ethnic, and cultural sensitivity.

We obtained information on parents' school involvement and parent-teacher relationships from parents only. Obtaining independent measures of these constructs from teachers, as some research has done (e.g., El Nokali et al., 2010), would have enhanced the study. Also, our sample of adoptive parents was largely affluent, well-educated, and White. Thus, although we succeeded in obtaining some aspects of diversity in our sample (i.e., with regard to sexual orientation), we did not have a very socioeconomically diverse sample, limiting the generalizability of our findings. Low-income parents are more constrained with regards to resources and thus may face additional barriers to involvement (Waanders et al., 2007). We also did not examine parents' home-based involvement (e.g., helping with homework), a domain that is frequently examined alongside school-based involvement, and which may have implications for children's school success (Tan & Goldberg, 2009). Future work, particularly with elementary-school age children of adoptive and same-sex parents, should consider predictors of school- and home-based involvement.

Implications for School Professionals

Our findings have implications for schools officials who wish to work effectively with diverse families (Hornby, 2011; Ortiz & Flanagan, 2002). We found similar levels of involvement by same-sex and heterosexual adoptive parents, suggesting that strategies for facilitating parents' involvement may be used for parents of diverse sexual orientations and partnership statuses. Also, our findings indicate that feeling marginalized by other parents is connected to parents' participation in school life, as well as their perceptions of teachers' receptivity to their families. Thus, school personnel are advised to engage in efforts to bring parents and families together (e.g., via school picnics and other events), as a means of breaking down perceived barriers among families of different backgrounds and enabling

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parents to regard each other as sharing a common commitment to their children's learning and well-being. School psychologists specifically should assess adoptive and same-sex parents' relationships with other parents as a point of intervention for increasing school connectedness and involvement. In addition to encouraging these parents to develop meaningful relationships with other parents in the school community, school psychologists should also consider the responsibility of the school to (a) improve the school climate and (b) ensure a school environment that is inclusive of all families; and, in turn, should possibly recommend trainings (e.g., on family diversity) to school personnel in order to reach these goals (Byard et al., 2013; Herbstrith, 2014).

Our findings suggest that parents' perceptions of schools' inclusion and sensitivity to diversity may impact their school engagement. School personnel, and school psychologists in particular, should actively assess the parent community's perceptions of school forms, classroom curricula, and teacher language and practices with respect to inclusion and diversity. Schools can enhance the inclusiveness and sensitivity of schools (e.g., with regard to culture, adoption, and same-sex parent families) by ensuring (a) that classroom materials (e.g., books) and curricula depict families from a wide range of backgrounds, including multiracial, multicultural, adoptive, and same-sex parent families and (b) that school forms and teachers' language acknowledge the existence of multiracial, multicultural, adoptive, and same-sex parent families (Byard et al., 2013; Herbstrith, 2014). Further, school personnel should be aware that heightened involvement on the part of same-sex parents may not be indicative of high investment; but, rather, it might indicate that parents perceive high levels of stigma or invisibility and thus are seeking greater involvement as a means of diffusing it and hopefully protecting their children and families. By using language and cultivating an environment that validates and reflects family diversity, schools avoid (re)producing larger systems of power that marginalize, stigmatize, and erase diverse family forms, thus increasing their chances of recruiting and retaining diverse families.

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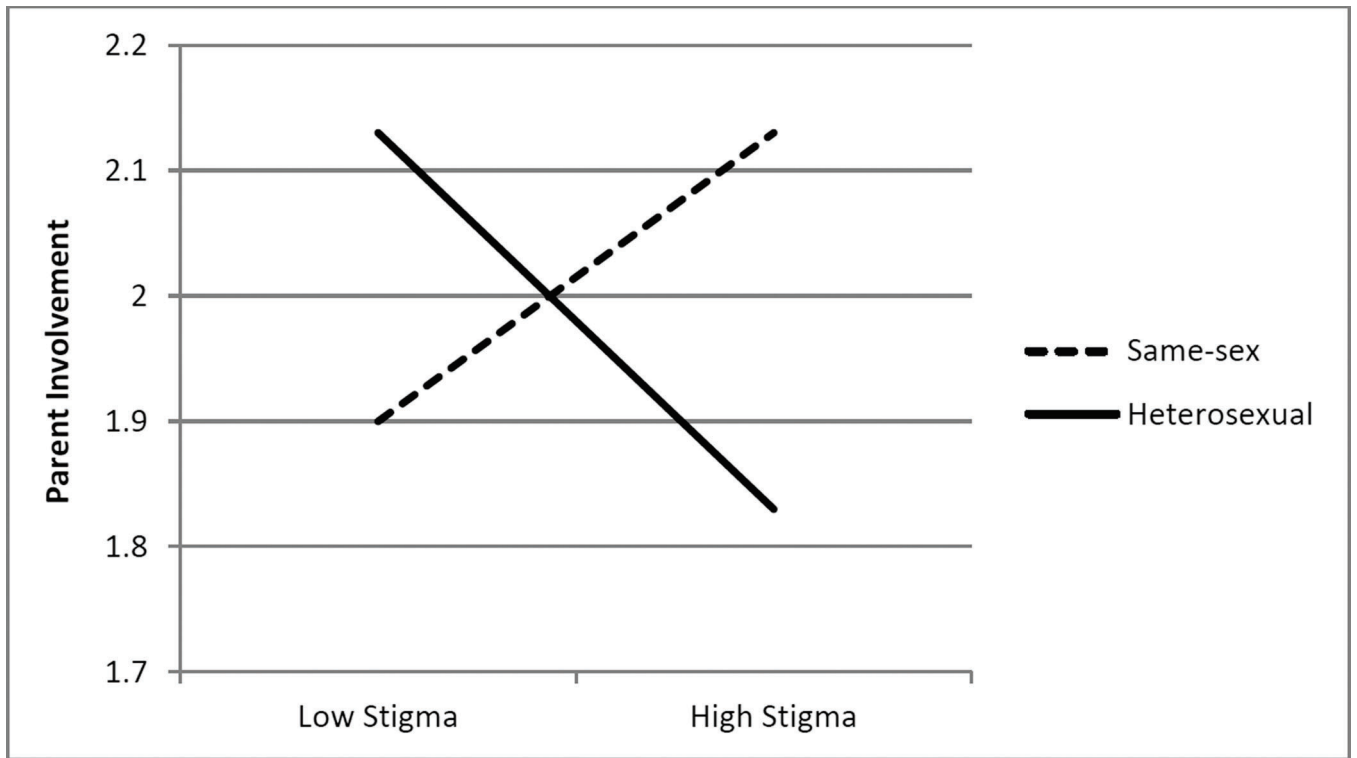


Figure 1. Interaction of Sexual Orientation and Adoption Stigma Predicting Parent Involvement.

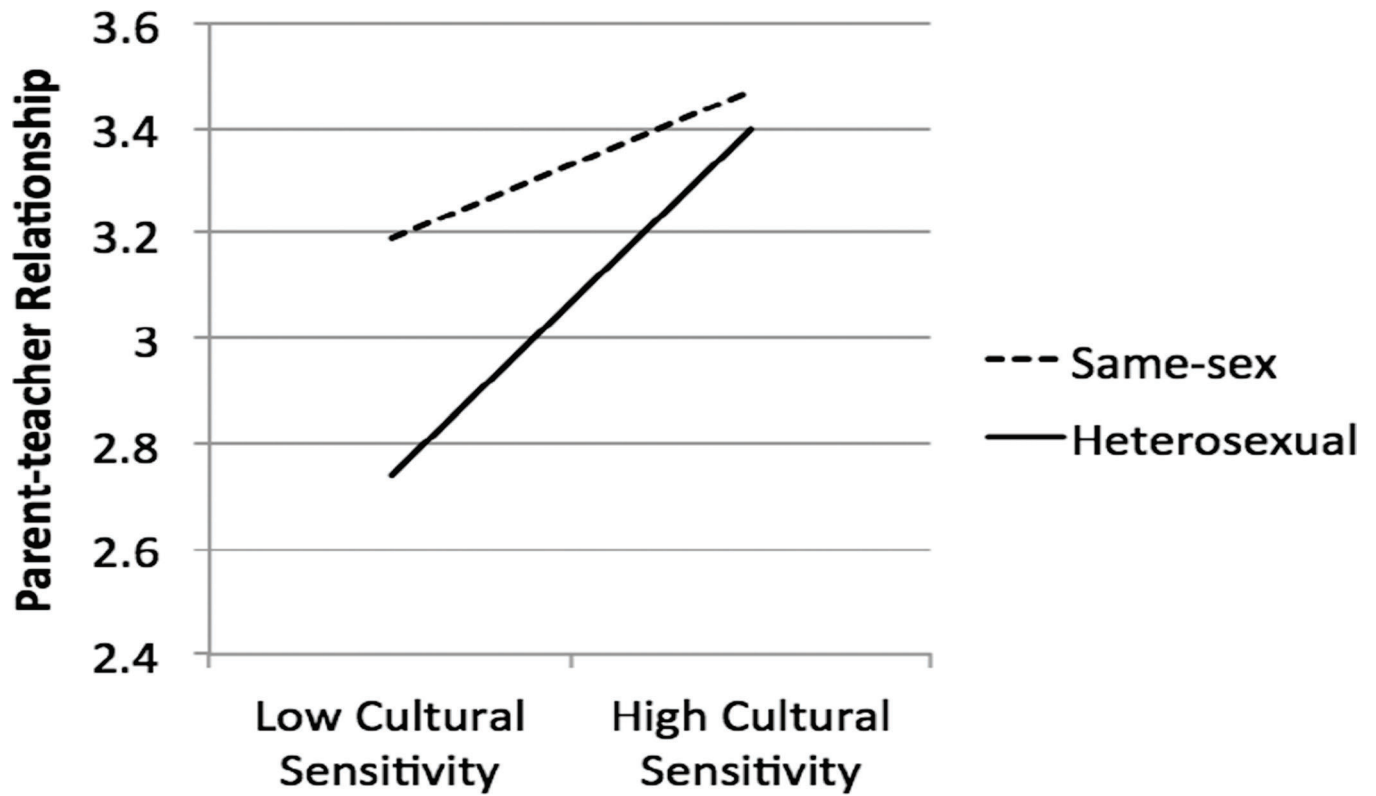


Figure 2. Interaction of Sexual Orientation and Cultural Sensitivity Predicting Parent-Teacher Relationships.

Table 1

Table of Descriptive, Control, Predictor, and Outcome Variables

Variable	Same-Sex Couples		Heterosexual Couples	
	Women <i>M (SD)</i>	Men <i>M (SD)</i>	Women <i>M (SD)</i>	Men <i>M (SD)</i>
Parent income	\$56,928 (\$36,064)	\$102,891 (\$76,869)	\$45,077 (\$40,988)	\$94,816 (\$53,078)
Parent work hours	34.71 (14.93)	39.84 (13.73)	22.91 (17.89)	45.57 (6.81)
Parent education	4.38 (0.92)	4.46 (0.51)	4.38 (0.66)	4.39 (0.69)
Positive school contact	12.91 (3.70)	13.29 (3.47)	12.26 (3.25)	11.11 (3.34)
Negative school contact	5.31 (2.43)	5.51 (1.95)	5.08 (1.38)	4.82 (1.19)
Acceptance by other parents	4.18 (0.70)	4.14 (0.64)	4.28 (0.73)	4.08 (0.64)
School cultural sensitivity	3.32 (0.48)	3.40 (0.46)	3.19 (0.62)	3.18 (0.57)
School adoption stigma	1.77 (0.54)	1.79 (0.59)	1.81 (0.49)	1.75 (0.35)
Child externalizing behavior	48.48 (10.19)	49.43 (12.01)	49.55 (11.29)	49.93 (9.64)
Parent involvement	2.28 (0.49)	2.14 (0.56)	2.24 (0.44)	1.99 (0.58)
Parent-teacher relationship	3.37 (0.60)	3.39 (0.50)	3.18 (0.69)	2.81 (0.84)
School satisfaction	3.12 (0.45)	3.31 (0.32)	3.01 (0.68)	3.10 (0.53)
	Same-Sex Couples <i>M (SD)</i> or %		Heterosexual Couples <i>M (SD)</i> or %	
Child age (months)	65.45 (6.45)		68.56 (8.37)	
Parent race (of color)	12%		10%	
Child race (of color)	61%		62%	
Child gender (boy)	51%		54%	
Adoption type				
Public domestic	10%		6%	
Private domestic	73%		68%	
International	17%		26%	
Public school	56%		45%	
Socialize with other parents	63%		70%	

Table 2

Intercorrelations Among Predictor and Outcome Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Parent involvement	--													
2. Parent-teacher relationship	.47	--												
3. School satisfaction	.34	.57	--											
4. Child age	-.29	-.08	-.07	--										
5. Public school	-.07	-.10	-.14	.22	--									
6. Income	-.12	.01	.08	-.05	-.16	--								
7. Work hours	-.22	-.11	-.03	.08	.03	.59	--							
8. Parent education	.05	.05	.07	-.003	.02	.22	.12	--						
9. Positive school contact	.36	.29	.30	.02	.11	-.07	-.11	.10	--					
10. Negative school contact	-.16	.05	-.17	.30	.10	-.12	-.07	.14	.14	--				
11. Acceptance by other parents	.37	.45	.32	-.16	-.16	-.02	-.14	.07	.23	-.14	--			
12. Socialization with parents	.35	.19	.14	-.31	-.15	.06	-.02	.10	.12	-.23	.44	--		
13. School cultural sensitivity	.26	.54	.53	-.08	-.09	.16	.05	.13	.19	-.12	.43	.18	--	
14. School adoption stigma	-.09	-.09	-.13	.13	.01	-.02	.02	.95	-.09	.18	-.31	-.20	-.21	--

Note. Hypothesis testing was not conducted for the bivariate correlations in order to limit the overall number of statistical tests. Consequently, statistical significance is not reported.

Table 3

Multilevel Models with Parent Engagement Subscales as Outcome Variables

Predictor Variables	PI β (SE)	PI with interact β (SE)	PI trim β (SE)	PTR β (SE)	PTR with interact β (SE)	PTR trim β (SE)	SS β (SE)	SS with interact β (SE)	SS trim β (SE)
Constant	1.95 (0.11)***	1.98 (0.12)***	2.00 (0.09)***	3.08 (0.12)***	3.07 (0.13)***	3.10 (0.06)***	3.31 (0.10)***	3.30 (0.11)***	3.26 (0.07)***
Child age	-0.003 (0.001)	-0.003 (0.002)	-0.004 (0.001)*	0.001 (0.002)	-0.004 (0.002)		0.001 (0.002)	0.001 (0.002)	
School type	0.03 (0.08)	-0.003 (0.08)		-0.09 (0.09)	-0.06 (0.09)		-0.08 (0.08)	-0.05 (0.08)	
Parent income	-0.001 (0.008)	-0.004 (0.008)		0.01 (0.01)	0.02 (0.09)		0.001 (0.006)	0.004 (0.006)	
Parent work hours	-0.005 (0.003)	-0.004 (0.003)	-0.006 (0.002)**	-0.005 (0.003)	-0.005 (0.003)	-0.004 (0.002)	-0.003 (0.002)	-0.003 (0.002)	
Parent education	0.007 (0.04)	0.03 (0.04)		-0.02 (0.04)	-0.03 (0.04)		-0.02 (0.03)	-0.02 (0.03)	
Parent sexual orientation	0.09 (0.08)	0.03 (0.12)	0.08 (0.08)	0.23 (0.09)*	0.26 (.13)*	0.26 (0.08)**	0.09 (0.08)	0.11 (0.11)	
Parent gender	0.08 (0.08)	0.03 (0.11)		0.08 (0.09)	0.12 (.14)		-0.16 (0.07)*	-0.15 (0.08)*	-0.13 (0.06)*
Positive school contact	0.04 (0.01)**	0.04 (0.01)**	0.03 (0.01)***	0.01 (0.01)	0.01 (0.01)		0.02 (0.009)*	0.02 (0.009)	0.02 (0.008)**
Negative school contact	-0.02 (0.03)	-0.03 (0.02)		0.06 (0.03)*	0.07 (.03)**	0.06 (0.02)**	-0.03 (0.02)	-0.03 (0.02)	-0.04 (0.02)**
Acceptance by parents	0.13 (0.06)*	0.14 (0.06)*	0.13 (0.06)*	0.27 (0.08)**	0.23 (.08)**	0.27 (0.06)***	0.06 (0.05)	0.05 (0.05)	
Socializing with parents	0.18 (0.09)*	0.22 (0.09)*	0.19 (0.09)*	0.02 (0.10)	-0.01 (0.10)		0.12 (0.08)	0.12 (0.08)	0.08 (0.06)
School cultural sensitivity	0.13 (0.07)	0.20 (0.12)	0.19 (0.07)*	0.51 (0.09)***	0.63 (0.14)***	.77 (.11)***	0.36 (0.06)***	0.39 (0.11)***	0.41 (0.06)***
School adoption stigma	0.08 (0.07)	-0.30 (0.18)	-0.24 (0.16)	0.11 (0.08)	0.32 (0.21)		-0.08 (0.06)	0.10 (0.16)	
Sex or x gender		0.10 (0.15)			-0.07 (0.18)			-0.02 (0.13)	
Sex or x cultural sensitivity		0.02 (0.16)			-0.35 (0.18)	-0.42 (0.15)**		-0.13 (0.14)	
Sex or x adoption stigma		-0.51 (0.21)*	0.46 (0.20)*		-0.39 (0.24)			-0.29 (0.18)	

Note. PI = Parent Involvement; PTR = Parent-Teacher Relationships; SS = School Satisfaction; Interact = Interactions; Trim = Trimmed; Sex or = Sexual orientation

* $p < .05$.

** $p < .01$.

*** $p < .001$.

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Lesbian, Gay, and Heterosexual Adoptive Parents' Experiences in Preschool Environments

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Abstract

Little research has examined the school experiences of lesbian/gay (LG) parent families or adoptive parent families. The current exploratory study examined the experiences of 79 lesbian, 75 gay male, and 112 heterosexual adoptive parents of preschool-age children with respect to their (a) level of disclosure regarding their LG parent and adoptive family status at their children's schools; (b) perceived challenges in navigating the preschool environment and advocating on behalf of their children and families; and (c) recommendations to teachers and schools about how to create affirming school environments with respect to family structure, adoption, and race/ethnicity. Findings revealed that the majority of parents were open about their LG and adoptive family status, and had not encountered challenges related to family diversity. Those parents who did experience challenges tended to describe implicit forms of marginalization, such as insensitive language and school assignments. Recommendations for teachers included discussing and reading books about diverse families, tailoring assignments to meet the needs of diverse families, and offering school community-building activities and events to help bridge differences across families.

Keywords

adoption; early childhood; gay; lesbian; preschool; teachers

Families in the US are becoming increasingly diverse and complex (Brodzinsky & Pertman, 2011). For example, lesbian and gay (LG) couples and individuals are increasingly becoming parents, particularly through adoption (Gates, Badgett, Macomber, & Chambers, 2007), although the overall number of adoptions by heterosexual couples and individuals continues to exceed the number of LG adoptions (Gates et al., 2007). Further, at least 40% of adoptions in the US are transracial (i.e., parents adopt children who are of a different race than they are), adding further complexity to both heterosexual and LG adoptive families (United States Department of Health and Human Services 2013). Finally, closed adoptions, where no contact or information is shared between adoptive and birth families, are becoming

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less common (Siegel & Smith, 2012). Today, most adoptions performed in the US are characterized by some level of openness between the adoptive parents and the birth parents, before and/or after the adoption (Siegel & Smith, 2012).

Despite such increases in family diversity and complexity, society – as well as the systems within society, such as the legal, health care, and school systems – have continued to prize the heteronormative nuclear biological family ideal, thus potentially marginalizing LG parent families and adoptive parent families. Indeed, the standard North American family (SNAF) of two heterosexual married individuals who are parenting biologically-related children continues to dominate societal consciousness as an “ideological code” (Smith, 1993), which can lead to the denigration and erasure of families that deviate from this idealized family form. Schools in particular have been slow to acknowledge and adapt to the growing diversity and complexity of families. Despite the increasing heterogeneity of the families that they serve, school practices and policies continue to be biased toward the experiences of Caucasian, heterosexual, two-parent, biologically-related families, thereby upholding and perpetuating the heteronormative nuclear standard of family life (Byard, Kosciw, & Bartkiewicz, 2013; Smith, 1993).

LG parent families are vulnerable to both explicit and implicit forms of marginalization within the school context (Byard et al., 2013). For example, teachers or school personnel may inappropriately question LG parents about their relationship or family life, or exclude LG parents from participating in school activities (Kosciw & Diaz, 2008). At a more subtle level, LG parent families may be implicitly marginalized via their absence from school curricula (which tends to focus on the experiences of heterosexual people and families) and school paperwork (e.g., which tends to assume and allow representation of heterosexual parent families only; Byard et al., 2013). Adoptive families, like LG parent families, also deviate from the biological heterosexual nuclear family standard, and thus may be explicitly or implicitly marginalized by schools (Brodzinsky & Pertman, 2011). For example, they may encounter questions, conversations, and assignments at their children's schools that reflect an assumption of biological relatedness between parents and children, as well as, on occasion, blatant manifestations of stigma (e.g., in the form of comments such as “I had no idea he was adopted! He looks like he could be your real child!”)

Little research has examined LG parents' experiences with their children's schools, and research on their experiences within early childhood educational settings is particularly sparse. Further, we know little about the school experiences of adoptive families, and how their school experiences may be shaped by adoption- or race-related factors. The current study examines the experiences of lesbian, gay, and heterosexual adoptive parents of preschool-age children with respect to their (a) level of disclosure regarding their LG parent and adoptive family status to schools; (b) perceived challenges in navigating the preschool setting; and (c) recommendations to teachers and schools regarding how to create affirming and inclusive school environments.

This study is informed by an ecological perspective in its focus on the role of intersecting contexts on development (Bronfenbrenner, 1986). While the family is the principal context in which child development takes place, another highly salient context is the school. When

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children are young, they are not only influenced by their school environment, but also, indirectly, by the parent-school relationship (Beveridge, 2005). Early interactions between parents and early educational settings are of great significance, in that they set the stage for parents' expectations about and involvement in their children's school lives (Casper & Schultz, 1999). Parents' perspectives of exclusion or mistreatment in early childhood settings are especially important to attend to, as they may have implications for parents' school connection and involvement throughout their children's lives (Galindo & Sheldon, 2012; Kosciw & Diaz, 2008).

LG Parents and Early Childhood Settings

Research on LG parents' experiences in schools is limited, and has tended to focus on LG parents of school-age children. Speaking to issues of explicit exclusion, the Gay, Lesbian, and Straight Education Network (GLSEN) surveyed 588 LGBT parents from across the US, most of whom were women and had a child in elementary school, and found that about one in six parents reported feeling that school personnel failed to acknowledge their type of family (15%) or felt that they could not fully participate in their child's school community because they were LGBT (16%) (Kosciw & Diaz, 2008). For example, parents described situations in which their child was not allowed to make two Mother's Day gifts or to display a family collage with the other students' work because it showed two lesbian mothers. Notably, a greater percent of parents (26%) reported mistreatment by other parents (e.g., being whispered about or ignored), raising an issue that is deserving of further exploration.

Gartrell and colleagues (1999), in a rare study of lesbian parents of young children, interviewed 84 lesbian mothers of toddlers and found that 8% of lesbian mothers reported difficulty finding good child care because they were lesbians, and 4% had changed day care facilities because of homophobic teachers or staff. By the time the children in the sample were five years old and enrolled in preschool or kindergarten, 18% of families reported having experienced homophobia by teachers or peers (Gartrell, Deck, Rodas, Peysner, & Banks, 2005). Thus, similar to the GLSEN survey, a relatively low incidence of sexuality-related discrimination was reported. Notably, the respondents in the GLSEN survey were primarily from the Northeast and West Coast, and Gartrell et al.'s sample was primarily located in very progressive areas of the country (e.g., San Francisco). Thus, these findings raise questions about the role of geographic context in shaping the school experiences of LG parents, and suggest the need to explore the school-related experiences of LG parent families living in a wide range of social and geographic contexts.

On a more subtle level, several studies have documented LG parents' perceptions of marginalization in the school curriculum. In the GLSEN (2008) study, only 29% of parents reported that their children's school curriculum included representations of LGBT people, history, or events, and, when these topics were included, such representations were sometimes negative (Kosciw & Diaz, 2008). Concerns about curriculum were also identified in a study of 15 lesbian-mother families with children of varying ages (Mercier & Harold, 2003). The lesbian mothers in this study voiced general concern about curricular content – not only related to the inclusion and representation of LGBT parent families, but also related

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to race, ethnicity, and culture. Such concerns were particularly salient among Caucasian lesbian mothers of children of color.

Research examining the attitudes of early childhood educators provides a different perspective on the challenges that LG parents encounter. Studies show that some teachers are uncertain about or uncomfortable with broaching issues of sexual diversity and family structure in the classroom (Maney & Cain, 1997; Robinson, 2002). One study of early childhood teachers and administrators found that participants were the least comfortable in discussing sexuality in comparison to other forms of diversity (Robinson, 2002). Most teachers expressed that they would incorporate LGBT issues in the curriculum only if they knew there were children from such families in their classroom. These teachers, then, were operating under the perhaps incorrect assumption that all LG parent families would elect to identify their family structure to teachers.

Thus, early childhood teachers' reluctance to discuss sexual and family diversity issues may be fueled by the perception that such issues are not relevant in their classrooms in the absence of (visible) LG parent families. Reluctance to discuss sexual and family diversity may also stem from religious beliefs (Kintner-Duffy, Vardell, Lower, & Cassidy, 2012; Maney & Cain, 1997; Robinson, 2002), lack of exposure to LG parents (Casper & Schultz, 1999; Kintner-Duffy et al., 2012), and concerns about resistance from parents and school officials (Martino & Cumming-Potvin, 2011). Notably, once teachers have received preparation for working with LG parent families, they report greater comfort addressing LGBT issues in their classroom (Kintner-Duffy et al., 2012). In the absence of such preparation, teachers may explicitly or implicitly create an environment where LG parent families feel excluded or mistreated.

Adoptive Parents and Early Childhood Settings

Like LG parent families, adoptive families are also vulnerable to explicit and implicit forms of marginalization related to their family structure within the school setting. Further, many children who are adopted are a different race than their parents, which introduces another form of difference to their families that may not be acknowledged or understood. Adoptive families may face marginalization related to their multiracial family status, and adopted children of color may face stigma related to their race specifically (Brodzinsky & Pertman, 2011; Goldberg, 2009).

There is little research on how adoptive parents – and LG adoptive parents specifically – experience their children's school environments, particularly within early childhood settings. Speaking to issues of explicit marginalization, a study of LG and heterosexual adoptive parents of young children found that although low levels of adoption-related stigma by teachers and school officials were reported overall, heterosexual adoptive parents reported higher levels of adoption-related stigma than LG parents (Goldberg & Smith, 2014). The authors suggested that, in that LG parents face potential discrimination based on their sexual orientation as well as their adoptive status, they may be more likely to experience stigma related to their sexual orientation – or at least attribute instances of stigma to their sexual orientation – compared to their adoptive family status.

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Speaking to issues of implicit exclusion, Nowak-Fabrykowski, Helinski, and Buchstein (2009) surveyed 23 heterosexual foster parents and found that the majority of respondents reported their children's teachers and classrooms did not have any materials related to adoption, and felt that teachers should make more of an effort to assign lessons about adoption (e.g., during Adoption Month). Thus, respondents demonstrated a general sense that schools could be doing more than they were to incorporate the experiences and needs of adopted individuals and their families into their materials and curricula. Likewise, in a study of 11 Caucasian parents with adopted Chinese daughters (who ranged in age from 2 to 9 years old), Tan and Nakkula (2004) found that parents often felt that their children's schools could be more culturally sensitive.

The absence of research on adoptive families' experiences in schools is concerning, given that societal stigma related to adoption is still pervasive (Goldberg, Kinkler, & Hines, 2011), and may trickle down into the attitudes and practices of school personnel, who may fail to understand or attend to the multiple dimensions of difference that are experienced by adopted children (Mattix & Crawford, 2011). Teachers may also neglect to discuss racial or family diversity in the classroom because they believe that young children are too young to understand these issues (Robinson & Ferfolja, 2002), an assumption that has been challenged by empirical research (Boutte, Lopez-Robertson, & Powers-Costello, 2011). Even when teachers are aware of the presence of adoptive families, they may not adapt their practices to be more inclusive of them. One survey found that more than half of early childhood educators were aware of adopted children in their classrooms, but, among these, only 34% had made adjustments in their teaching practices, typically in relation to assignments related to families (Taymans et al., 2008).

Beyond failure to acknowledge and discuss adoptive families as one of many different kinds of diverse families, teachers may also fail to recognize that the adopted children in their classrooms may have personal histories marked by disruption and instability (e.g., abuse, neglect, multiple living arrangements; Dumaret, Duyme, & Tomkiewicz, 1997; Goldberg & Smith, 2013). In turn, children with such histories may have unique learning, emotional, and behavioral needs and challenges (Howard, Smith, & Ryan, 2004; Nickman et al., 2005). Speaking to this issue, children who are adopted – and, in particular, those who are adopted at older ages, via foster care and from abroad – tend to be overrepresented among children receiving special education services (Meese, 1999; Nickman et al., 2005). Thus, schools should anticipate the possibility that adoptive families and children may present with unique needs, and should be prepared to effectively and compassionately address such needs.

Parents' Strategies for Minimizing Exclusion and Marginalization

Aware of their vulnerability in the school setting, LG parents and adoptive parents may explicitly address their family structure with their children's schools, thereby communicating their stance as active and involved parents who will not accept discriminatory treatment. In Casper and Schultz's (1999) study of LG parents of children who ranged widely in age, some parents described a proactive approach to their children's schools, whereby they introduced themselves, informed the school of their status as an LG parent family, and advocated for their children from the beginning of the school year. Others chose to come out

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to their children's teachers more implicitly (e.g., via school forms), whereas others did not disclose their sexual orientation or family configuration at all, in part due to a perceived lack of tolerance. More recent studies of lesbian mothers in the US have found that most parents reported being "out" to their children's teachers (Kosciw & Diaz, 2008; Mercier & Harold, 2003). In GLSEN's survey of LGBT parents, for example, two-thirds of parents reported that they had spoken with teachers about being an LGBT parent (Kosciw & Diaz, 2008). Yet figuring out how to come out, and how out to be, continues to be a challenge for some parents (Mercier & Harold, 2003), especially in rural or less progressive areas (Lindsay et al., 2006) and among parents with less education (Nixon, 2011).

High rates of volunteering have been observed in some surveys of LGBT parents of children in kindergarten through 12th grade (Kosciw & Diaz, 2008; Mercier & Harold, 2003), which may in part reflect a proactive or reactive strategy aimed at minimizing the likelihood of sexuality-related stigma perpetrated against their families (Mercier & Harold, 2003). That is, LG parents may volunteer at their children's schools not simply because they are invested in their children's education, but because they believe that by making themselves visible, they make it more difficult to discriminate against them, help to increase the school's comfort with LG parent families, and ultimately contribute to a safer environment for their children (Mercier & Harold, 2003). They may also explicitly seek out gay-friendly schools to decrease the likelihood of mistreatment: Goldberg and Smith (2014) found that LG parents strongly considered the gay-friendliness of prospective schools in selecting early childhood settings for their children. The extent to which LG parents are able to select schools that meet their ideals is, of course, mediated by geographic and financial resources (i.e., whether such schools are accessible and affordable).

Little research has examined adoptive parents' openness about their adoptive status, or their efforts to advocate on behalf of their children in the school system. One exception is Tan and Nakkula's (2004) study of Caucasian parents with adopted Chinese daughters. The authors asked parents about their attitudes and practices related to racial/cultural socialization and found that parents utilized a number of strategies to help their daughters learn about their Chinese heritage, including advocating for culturally sensitive schools. This study highlights the fact that for parents who adopt a child from a different culture or race, the racial/cultural sensitivity and inclusiveness of the school may take on heightened importance. Further support for this comes from several studies that have found that heterosexual (Goldberg & Smith, 2014) and LG (Mercier & Harold, 2003) adoptive parents tend to value racial diversity and multiculturalism in selecting schools for their children, particularly when they adopted children of color. Thus, adopting children of color may add further complexity to parents' experiences intersecting with schools, by heightening their sensitivity to issues of racial inclusion and diversity, as well their awareness of implicit and explicit racial bias. Further, Caucasian parents who adopt children of color may not simply experience a heightened awareness of race, but may also find that the visible differences between themselves and their children "mark" them as adoptive, and, thus, as deviant from the hegemonic nuclear family ideal (Smith, 1993). In turn, they likely experience a lesser degree of privacy and control over disclosure of their adoptive family status (Jacobson, 2009).

Research Questions

Based upon the limited work on LG and adoptive parents' experiences intersecting with schools, particularly in early childhood, this study seeks to answer several research questions:

1. To what extent do LG and heterosexual adoptive parents disclose key aspects of their family structure (i.e., parent sexual orientation, adoptive family status) to teachers and schools? Further, how do parents explain their decision not to disclose such details?
2. What challenges do LG and heterosexual adoptive parents report with regard to teachers and schools, related to their family structure (i.e., parent sexual orientation, adoptive status, child race)?
3. To what extent do patterns of disclosure and reported challenges appear to be shaped by parent sexual orientation, adoptive status, child race, and geographic location?
4. What suggestions do LG and heterosexual adoptive parents have for schools? That is, how could schools improve their treatment of diverse families, according to parents?

Method

Description of the Sample

Data come from 266 parents in 142 families. In 36 lesbian-parent families, both partners participated, and in seven lesbian-parent families, one partner participated ($n = 79$ parents). In 36 gay-male-parent families, both partners participated, and in three gay-male-parent families, one partner participated ($n = 75$ parents). In 52 heterosexual-parent families, both partners participated, and in eight heterosexual-parent families, one partner participated (in all cases it was the mother; $n = 112$ parents). Thus, a total of 79 lesbian, 75 gay male, and 112 heterosexual parents were surveyed about their perceptions and experiences of their children's preschools.

The current sample was drawn from a slightly larger sample of parents with adopted children under 5.5 years of age. Prior publications using this sample have largely focused on parents' experiences transitioning to parenthood, with attention to their well-being (Goldberg & Smith, 2011) and parental roles (Goldberg, Moyer, & Kinkler, 2013); one paper examined parents' preschool selection process (Goldberg & Smith, 2014). Participants were included if their child was in preschool (92% of the larger sample).

ANOVA revealed that the average family incomes for lesbian, gay, and heterosexual parent families differed significantly, $F(2, 140) = 5.33, p = .005$, such that gay-male couples ($M = \$196,577, Mdn = \$150,000, SD = \$132,641$) had a significantly higher annual combined income than lesbian couples ($M = \$123,268, Mdn = \$105,000, SD = \$63,795$), $p = .001$, and heterosexual couples ($M = \$137,666, Mdn = \$120,000, SD = \$85,410$), $p = .01$. The sample as a whole is more affluent compared to national estimates for same-sex and heterosexual

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adoptive families, which indicate that the average household incomes for same-sex couples and heterosexual married couples with adopted children are \$102,474 and \$81,900, respectively (Gates et al., 2007). The sample as a whole was well-educated, $M = 4.50$ ($SD = 1.00$), where 4 = bachelor's degree and 5 = master's degree. Hierarchical linear modeling (HLM, in which parents were nested within couples) revealed no differences in education level by family type.

The average age of the children was 3.41 years ($SD = .99$); ANOVA showed that age did not differ by family type. Most had been adopted via private domestic adoption (67%); the remainder were adopted internationally (22%) and via public domestic adoption (foster care) (11%). Fifty-six percent of couples adopted boys, and 44% adopted girls. The adoptive parents in the sample were mostly Caucasian (89%); 4% were Hispanic/Latino/Latin American, 3% were biracial/multiracial, 2% were African American/Black, and 2% were Asian. Their children were mostly of color. Namely, 36% of children were Caucasian, 23% were biracial/multiracial, 19% were Hispanic/Latino/Latin American, 11% were African American/Black, and 11% were Asian. Regarding parent-child racial match, in 55% of cases, the parent was Caucasian whereas the child was of color. In 35% of cases, both the parent and the child were Caucasian. In 7% of cases, the parent and the child were both of color and of the same race. In 2% of cases, the parent and the child were both of color but of different races. In 1% of cases, the parent was of color whereas the child was Caucasian. Chi squares showed that the distributions of adoption type, child gender, parent race, child race, and parent-child racial match did not differ by family type.

The types of preschool environments that children were enrolled in varied. Twenty percent of the sample reported that their children attended public preschools (e.g., YMCA-based programs), and 80% reported that their children attended private preschools. Within the latter group, 33% were described as private day care based programs, 22% were Montessori schools, 7% were religiously oriented or affiliated preschools (e.g., Catholic), and the remainder were given a wide range of descriptors (e.g., Waldorf; French Immersion; country day school; university-based). Hours in school differed by family type, $F(2, 140) = 6.54$, $p = .002$, such that the children of gay fathers were in preschool for significantly more hours per week ($M = 32.21$, $SD = 11.44$) than the children of lesbian mothers ($M = 22.62$, $SD = 12.07$), $p = .001$, and the children of heterosexual parents ($M = 23.89$, $SD = 12.34$), $p = .002$. Regarding geographic location, 46% of the sample resided on the East Coast, 27% lived on the West Coast, 16% lived in the Midwest, and 11% lived in the South. Just over half of the sample (51%) lived in metropolitan areas (a core urban area of 50,000 or more population); the remainder (49%) lived in non-metro communities (US Census, 2013). Chi-square analyses showed that children of color were more likely to reside in metro areas than Caucasian children, $\chi^2(1, 140) = 3.21$, $p = .04$: 54% of children of color lived in metro areas, compared to 44% of Caucasian children.

Recruitment

Inclusion criteria for the larger study from which this sample was drawn were: (a) couples must be adopting their first child; and (b) both partners must be becoming parents for the first time. Couples were recruited during the pre-adoptive period (i.e., while they were

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waiting for a child). Over 30 adoption agencies throughout the US were asked to provide study information to all clients who had not yet adopted, typically in the form of a brochure inviting them to participate in a study of the transition to adoptive parenthood. Interested couples were asked to contact the researcher for more information. U.S. census data were used to identify states with a high percentage of same-sex couples (Gates & Ost, 2004) and effort was made to contact agencies in those states. Both heterosexual and same-sex couples were recruited through agencies, in an effort to match couples roughly on geographic status and financial resources. Because some couples may not be “out” to agencies, national LGBT organizations also assisted in disseminating study information. For example, the Human Rights Campaign (HRC) posted a description of the study on their Family-Net listserv, which is sent to 15,000 people per month.

Couples who participated in the original study of the transition to adoptive parenthood were recontacted three years after they had adopted and asked to participate in a follow-up. Both members of each couple were asked to complete an in-depth questionnaire packet that focused on their experiences with their children's schools. Questionnaires included closed- and open-ended items that addressed parents' school experiences. Members of same-sex couples were mailed questionnaires with additional questions that addressed unique aspects of their experience as sexual-minority parents. Data are drawn from this three-year post-placement assessment.

Procedure

Participants responded to a series of open-ended questions, in written form, regarding their experiences navigating their children's schools. The following open-ended questions were included in the survey packet and used in the analysis: (1) Have you talked to your child's school/teachers about your child being adopted? (2) If you have not talked to your child's school/teachers about your child being adopted, why not? (3) Have you talked to your child's school/teachers about the fact that your child has two dads/two moms? (*LG parents only*) (4) If you have not talked to your child's school/teachers about your child having two dads/two moms, why not? (*LG parents only*) (5) What challenges do you face in advocating for your child, dealing with teachers, etc.? (6) If you have had any negative experiences with your child's teachers related to your status as an adoptive family, please explain/give examples. (7) If you have had any negative experiences with your child's teachers related to your status as a two-mother/two-father family, please explain/give examples. (*LG parents only*) (8) Please describe any ways in which you have struggled in educating teachers and school personnel about your families/your child, and managing ongoing relationships with your children's teachers/school personnel. (9) Please list any suggestions you have for schools or teachers, in terms of making your families feel more welcome (with respect to your child's race, adoptive status, etc.)

Data Analysis

Participants' responses to the above questions were examined via qualitative analysis. The author approached the analysis using a content analysis method, which is a standard method for examining responses to open-ended questions, and represents a process of identifying, coding, and categorizing the primary patterns or themes in the data (Patton, 2002). This

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process of exploring and classifying qualitative data represents an organized, systematic, and replicable practice of condensing words of text into a smaller number of content categories (Krippendorff, 1980), with the goal of creating a coding system to organize the data (Bogdan & Biklen, 2007).

The coding process proceeded as follows: After reading transcripts of each person's data multiple times, the author then initiated the coding process with open coding, which involves carefully examining the participant responses and highlighting relevant passages within them (Charmaz, 2006). This led to the specification and refinement of emerging categories or codes. For example, a heterosexual woman who had adopted an African American child stated, "We live in a very white area. We tried to get into a preschool that was more racially diverse, but we didn't end up getting off of the wait list." Several preliminary codes were assigned to this passage of text, namely: "racially homogenous community," "racially homogenous preschool," and "efforts to change schools." Next, focused coding was pursued, which uses initial codes that frequently reappear in order to sort the data. For example, "lack of racial diversity in one's geographic area" was identified as a race-related challenge which recurred in a number of participant responses. This process of organizing and sorting is more conceptual in nature than initial coding (Charmaz, 2006), and the categories that emerge are those that best synthesize the data. The author then applied the coding scheme to the data, which allowed for the identification of more descriptive coding categories and generation of themes for which there was the most substantiation in the data. Categories were examined across family type (LG and heterosexual parent families) to identify similarities and contrasts in the nature and meaning of various coding categories (Patton, 2002). Attention was also paid to whether and to what extent themes varied according to other characteristics of the sample (e.g., child race, adoption type, and geography). Themes that varied by parent sexual orientation, child race, adoption type, or geographic location are discussed only when differences in themes clearly emerged along these dimensions. In turn, if these dimensions are not discussed, they did not emerge as salient in distinguishing participant responses or differentiating patterns in the data. The coding scheme was continually applied to the data and revisions were made until all relevant data were accounted for with the codes.

At this stage, the author enlisted a research assistant to independently code a random selection of transcripts (one-fifth of the responses generated by heterosexual, lesbian, and gay participants), in an effort to verify the usefulness and soundness of the emerging scheme (Patton, 2002). This process of check coding is useful in helping to clarify categories and definitions and to provide a reliability check (Miles & Huberman, 1994). Initial intercoder agreement ranged from 80–85% across coding categories ($\text{reliability} = \frac{\text{\#agreement}}{\text{\#agreements} + \text{\#disagreements}}$). Discussion of coding disagreements led to several refinements in the scheme and clarification of the coding definitions. The author then applied the revised scheme to all responses, and the secondary coder coded a random selection (one-fifth) of the transcripts. Intercoder agreement of the final scheme ranged from 90–95% across coding categories, providing evidence of the utility of the scheme for describing the data. The findings are organized around the final scheme, which appears in Table 1. The number of individuals who endorsed each theme, within each group, is specified. When both members

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of a couple endorsed a particular theme, this is specified. Pseudonyms are used for all participants.

Results

The findings are discussed in three major sections. First, participants' disclosure practices regarding their families are discussed, followed by perceived challenges in the school setting, and finally, participants' suggestions to schools and teachers (see Table 1).

Disclosure of Lesbian/Gay Parent Status to Teachers and School Personnel

Most LG parents reported that they had discussed or at least mentioned the fact that their child had LG parents to their children's schools. Namely, 89% of lesbian parents ($n = 70$) and 91% of gay male parents ($n = 68$) reported that they had talked to their children's teachers about their status as a two-mom/two-dad family. In some cases, broaching the topic of their family structure had been part of the school selection process: that is, several participants noted that mentioning this during the process of looking for a preschool "helped to weed out" certain schools. Those who had not talked to their children's teachers about their status as a two-mom/two-dad family provided the following reasons: It is obvious (e.g., because we show(ed) up together), and therefore unnecessary (three lesbian women, four gay men); and my own internalized homophobia/hesitancy to raise the issue (one lesbian). Notably, all eight of these participants resided in non-metro areas, and four of them lived in the South, hinting at ways in which their geographic location and immediate communities may have shaped their relative openness regarding their family structure. Indeed, Carrie, a lesbian who had adopted her Caucasian son through private domestic adoption, spoke directly to the challenges that she and her partner had faced in finding an explicitly inclusive school in the South: "Here in the South, our greatest challenge was finding a preschool that was *not* based in a particular religious philosophy. We had limited options." Finally, five lesbians and three gay men provided no explanation as to why they had not explicitly come out to their children's teachers.

Disclosure of Adoptive Status to Teachers and School Personnel

Most parents stated that they had discussed or at least mentioned the fact that their child was adopted to their children's teachers and schools. Namely, 92% of lesbian parents ($n = 73$), 89% of gay male parents ($n = 67$), and 83% of heterosexual parents ($n = 93$) reported that they had told their children's teachers and schools about their children's adoption. In some cases, parents noted that these were "formal conversations" (e.g., initiated during the school application process or early in the school year), whereas others suggested that they had pursued a more casual approach of simply "mentioning it when it seemed relevant." As Rachel, a lesbian who had adopted her multiracial daughter via private domestic adoption, explained: "I've talked openly about adoption and the fact that May has a birth mom when appropriate in conversation but I didn't have a specific talk with the teacher or school."

Those who had not talked to their children's teachers about their adoptive family status provided various explanations for this. Namely, we haven't felt the need; it doesn't seem relevant/necessary was the reasoning provided by 11 participants (one lesbian couple, four

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gay men, one heterosexual couple, two heterosexual women, one heterosexual man). Tina, a heterosexual woman who had adopted her biracial son via foster care, declared: “I don't see that it's the school's business that he's adopted and I don't intend on telling them unless it's necessary.” Six participants (one gay male couple, one lesbian woman, one heterosexual couple, one heterosexual woman) explained their lack of disclosure by noting that their child's adoption *hadn't come up*. Notably, all but one of these participants had adopted inracially; thus, the lack of obvious racial distinction between themselves and their children had presumably led to the invisibility of their child's adoptive status, which parents had not made an effort to correct. In direct contrast, four participants (two gay men, two heterosexual women) explained their non-disclosure of their child's adoptive status by indicating that *it is obvious (our child is a different race than us) and thus not needed*. Cheryl, who had adopted her biracial son via private domestic open adoption, explained, “Because he is of a different race from us, it is obvious [that he is adopted] when we are all together.” Thus, both racial invisibility and visibility were deployed to account for parents' non-disclosure. Finally, three lesbian parents and nine heterosexual parents provided no explanation as to why they had not discussed their family's adoptive status.

Challenges in Dealing with Teachers

Participants reported a range of family-diversity-related challenges in dealing with teachers and advocating for their children. Specifically, they named challenges related to their status as LG and adoptive parents, as well as racial diversity and sensitivity.

Challenges related to LG parent status—Most LG participants (namely, 75% of lesbians and 89% of gay men) stated that they had not encountered any challenges related to their sexual orientation. In some cases, they simply noted the absence of challenges (e.g., “we have had no difficulties”; “we continue to be fortunate in our school experience, and haven't had many problems”) whereas in other cases they commented explicitly on the inclusive and accepting nature of their school (“no other preschool we looked at felt as supportive and inclusive as this one”; “the school has been very accepting; they pride themselves on their diversity”). In a few cases, parents attributed their positive experience to geography (“we live in LGBT nirvana when it comes to parenting”), and in a few cases, they invoked the fact that their child was enrolled in a *private* preschool as a means of explanation (“as long as we can afford to send Jake to a private school I'm confident we'll have few issues; if we go public I'm much less confident”).

Challenges related to their status as a two-mother, two-father family were named by 25% of lesbians ($n = 20$) and 11% of gay men ($n = 8$), with some participants mentioning multiple challenges. Specifically, eight participants (six lesbian women, one gay male couple) indicated that their children's teachers' *lack of experience with LG parents* was a challenge. Several mentioned that they were the first LG parents at their children's schools, which required them to do a “lot of education.” Dave, a gay father who had adopted his multiracial daughter via private domestic adoption, shared, “We have been the first gay family at each of Lucy's schools, and we have had to initiate conversations about sensitivity.” Other parents explicitly mentioned challenges related to *heterosexist language* at school. Namely, heterosexist language on school forms (e.g., mother/father) and in the classroom (e.g.,

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teachers only referring to “moms and dads”) was highlighted by seven participants (two lesbian couples, three lesbian women). Zara, a lesbian who had adopted a Caucasian boy via foster care, stated, “I was disappointed that the school district forms were not inclusive and use mother and father on paperwork.”

Seven participants (four lesbians, three gay men) highlighted teachers' apparent lack of comfort with or understanding of their family structure as a challenge, which was often evident in teachers' confused or awkward responses to parents' names or naming practices. One lesbian, for example, noted that the fact that she and her partner had different last names seemed to cause confusion and “raised questions.” Two gay men noted that their children's teachers were “confused” about their own and their partner's designations as Daddy and Papa, respectfully. Notably, all of the seven participants who described teachers' apparent discomfort resided in non-metro areas, suggesting that parents in less urban settings may encounter greater unfamiliarity and discomfort with their family structure in the school environment specifically. Further, all but one of these (Caucasian) participants had adopted a child of color, suggesting that perhaps it was not simply their LG parent status, but also their status as a multiracial family, that prompted such awkwardness and confusion on behalf of schools, teachers, and staff.

Few examples of *explicitly heterosexist or homophobic treatment* were described by participants. One lesbian described “homophobic bullying” by teachers and school district officials (she did not provide details); one lesbian described being prevented from volunteering at her child's school, which she attributed to her sexuality; one lesbian noted that her child was only allowed to make one candle for Mother's Day; and one gay man recounted that a teacher had “jokingly referred to us as pedophiles.” In addition, one gay man described “wondering” about whether his daughter's teachers “engage with her more because...they may wonder about her not having a mother, although no one has expressed that to us directly.”

Although not directly related to teachers, it is notable that four parents (three lesbians, one gay man), all of whom had adopted children of color, identified *other parents* as a challenge, such that the other parents at their children's schools had not seemed accepting of them. For example, Rachel, who had adopted her African American daughter via foster care, noted how her “biggest challenge” was a “lack of desire of our daughter's friends' parents to have their children play at our house. Many kids come from very religious/new immigrant groups. Parents don't seem to want to mix with us.” Rachel also added that the school had “very few, if any” LG parent families, suggesting that she attributed other parents' reluctance to socialize with her family to her sexual orientation. However, the fact that she – and the other three participants in this category – had also adopted transracially suggests that perhaps the multiracial nature of their family represented another reason for other parents' apparent avoidance of them.

Challenges related to adoption—Most parents (80% of lesbians, 96% of gay men, and 74% of heterosexual participants) stated that they had not had any challenges related to adoption. In many cases, parents simply noted the absence of challenges, whereas in a few cases, parents explicitly commented upon the inclusive nature of their children's schools,

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particularly where adoption, race, and ethnicity were concerned (“We have felt very accepted and it is very inclusive in general...The teacher incorporated Chinese New Year activities and books”). Several parents pointed out the presence of other adoptive families at their children's schools as a means of explaining the school's inclusivity with regard to adoption (“We have had no problems... We are not the only adoptive family there, and the staff and other families are very receptive”).

Challenges related to their status as an adoptive family were named by 20% of lesbian parents ($n = 16$), 4% of gay male parents ($n = 3$), and 26% of heterosexual parents ($n = 29$). In some cases, participants mentioned multiple adoption-related challenges. Such challenges often reflected a lack of education about or understanding of adoption issues on the part of teachers and personnel. Namely, 12 participants (four lesbians, three gay men, one heterosexual couple, three heterosexual women) noted that their children's teachers had demonstrated insensitivity and/or ignorance about adoption issues, such that they were “not adoption savvy.” As Mimi, a lesbian who had adopted her African American son via private domestic adoption, stated, “We will need to do some education about how adoption is not rescuing a child. We've already gotten one comment from a teacher that shows that common misconception.” Likewise, Anna, a heterosexual mother who had adopted her Caucasian son via foster care, shared that, from the perspective of the school, her child was “expected to be ‘thankful’ about being adopted.” Lack of sensitivity to issues related to open adoption specifically was highlighted by five of these parents (three lesbian women, one gay man, one heterosexual woman). As Erik, a gay man who had adopted his Caucasian son via private domestic adoption, stated, “The biggest hurdle is explaining our fully open adoption and relationship with his birth family.” Mary, a heterosexual woman who had adopted her biracial son via private domestic adoption, shared her perception that open adoption is “unfamiliar and uncomfortable” for many people; thus, “helping [teachers] to understand open adoption and our open relationship with birth parents is a challenge.”

Adoption-insensitive language was highlighted as a problem by eight participants (one lesbian couple, one lesbian woman, one heterosexual couple, one heterosexual woman, and two heterosexual men). One heterosexual father explained that his child's teacher had referred to him as his son's “adoptive father.” Similarly, three lesbians noted that their teachers used terms like “real parents” or “real mother” to describe their children's birth parents. Julie, the lesbian mother of a biracial son adopted via public domestic adoption, explained, “Terminology [is a problem]; there is ignorance when talking about birth parents—they use ‘mom’ or ‘real parents.’”

Curriculum issues related to adoption were identified as posing challenges by five participants (one lesbian, one heterosexual couple, two heterosexual women). Namely, teachers' lack of education about fetal alcohol syndrome (one heterosexual woman); the refusal by school officials to do a free adoption training that the participant recommended to them (one heterosexual woman); the teacher's assignment of a family tree exercise (one lesbian woman); and the teacher's request to bring in newborn photos of the child (one heterosexual couple) were named as challenges. Speaking to this last issue, Raymond, a heterosexual father who had adopted his multiracial daughter via private domestic adoption, shared: When our child turned three, they asked us to bring pictures from when she was

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born, one year, and two years old. When they showed the first pic, one teacher asked me to talk about the day she was born, but I wasn't there. The pic I had was when she was three weeks old. I explained that was the day we got her.

Notably, all of the participants who identified curricular issues resided in rural/non-metro areas. Thus, such issues may be pronounced for adoptive families living in non-urban environments, which may be less diverse and varied in terms of family structure.

Teachers' lack of understanding of how adoption affects children's emotional and behavioral functioning was highlighted as a challenge by 16 participants (two lesbian couples, five heterosexual couples, two heterosexual women), all but one of whom had adopted via international or public domestic adoption. Six of these participants (two heterosexual couples, one lesbian couple) emphasized their perception that their children's behavioral problems were related to the losses that they had experienced – a reality which teachers “did not get.” Indeed, several of them noted that teachers' ignorance regarding this issue was reflected in their use of behavioral techniques that were inappropriate for an adopted child (e.g., a teacher's use of isolation as a means of punishment was viewed as “problematic,” given the child's abandonment issues). Likewise, four lesbian parents (two couples) voiced their perception that their children's teachers did not grasp the significance of their children's early disrupted placements or abuse history on their behavior. Lila, the lesbian mother of a biracial boy adopted via public domestic adoption, noted that her son suffered post-traumatic stress disorder due to his early negative life experiences, but his teachers “just see him as [exhibiting] bad behavior.” She went on to say: “Little attention has been given to [his] unique history and the impact of that history on learning and socialization.” Candice, a lesbian who had adopted her multiracial son via public domestic adoption, noted that a “huge challenge” was getting teachers to “understand that his emotional adjustment and ADHD is *not* just because he is a boy.” The high number of couples (as opposed to individual partners) represented in this category suggests that teachers' lack of understanding regarding the impact of adoption on child functioning was a prominent and mutually shared concern for some parents - and one that they likely discussed with their partners at home.

While the above participants felt that their children's teachers were not sufficiently aware of the role that adoption had played in their children's current socialization and behavior, others felt that their children's teachers over focused on their children's adoption as the root cause of all problems. Namely, nine participants (one lesbian couple, three heterosexual couples, one heterosexual woman) noted that their children's teachers were quick to bring up adoption when their child exhibited behavioral or developmental challenges. That is, teachers seemed to believe that all of their children's problems stemmed from the fact that they were adopted, abused, neglected, or exposed to drugs in utero. Leanne, a heterosexual mother who had adopted her Caucasian son via private domestic adoption, explained: “I feel that once his old preschool found out he was adopted, all of sudden they started having problems with him. He got kicked out... Learning that some teachers associate behavior with being adopted [when] they have nothing to do with each other has been a real eye opener.” Vanessa, a heterosexual mother who had adopted her Latino son via private domestic adoption, shared how her son had “behaved terribly” on his first day of preschool (i.e., had a huge tantrum). When she came to pick him up, the teachers all asked whether his biological

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mom had used drugs, wondering if he had a behavior problem as a result. I understand the reason for this question, but it was jarring that they immediately wanted to label him with a behavior problem because of being adopted...I told them I wasn't aware of any drug issues, which wasn't totally true because his birth mom had used drugs before she found out she was pregnant. But I wasn't going to tell them that and give them fuel to label my son...I felt that it was too early to come up with some sort of diagnosis of him as a "problem" because he was adopted.

Like the previous theme, concerns regarding teachers' over focusing on adoption as the root cause of all problems tended to be reported by both partners within a couple. Again, the high degree of consistency within couples suggests that this was a salient concern for these participants, and likely one that they talked and deliberated about with their partners.

Perhaps because they anticipated the possibility of the above challenges, seven participants (two lesbians, two heterosexual couples, one heterosexual woman), all of whom had adopted via public adoption or from abroad, described struggling with uncertainty about how much to share with their children's teachers. They were trying to find a balance between letting teachers know about their children's background without leading them to form biased judgments about their child based upon their adoptive status and history. Lenny, a heterosexual father of an African American boy adopted via foster care, shared that his biggest struggle was "finding ways to let the school know about his history/issues without prejudicing them before they get to know him." Anna, a heterosexual mother who adopted her Caucasian son via foster care, described feeling "stuck" about what to share about her son's history, having been warned by a caseworker "never to tell anyone he was adopted, and to never mention he was adopted from foster care."

Challenges related to race—Challenges related specifically to race were named by 8% of lesbians ($n = 6$), 4% of gay men ($n = 3$), and 6% of heterosexual participants ($n = 7$). Six participants (three lesbian women, two gay men, one heterosexual woman), all of whom had adopted children of color, indicated that their children's teachers' lack of education about and experience with racial diversity had posed a challenge. For example, Louise, a lesbian who had adopted her African American son via private domestic adoption, noted that her child's teachers had said that they were "color-blind" and that "children don't see or notice skin color," which, to her, indicated problematic assumptions surrounding race and a clear need for "lots of learning." Robbie, a gay father of an African American boy adopted via public domestic adoption, noted that they had changed preschools due to racial/cultural insensitivities: "The first school was disappointing in the lead staff's knowledge and awareness around race and culture issues, so we switched to another school. The teachers at the first school were great, but the administration was not where we wanted them regarding the issues that are important to us."

In addition, 10 participants (three lesbian women, four heterosexual women, two heterosexual men, one gay man), all of whom had adopted children of color, cited a *lack of racial diversity* at their children's school as a challenge, with one heterosexual woman noting that her daughter was beginning to notice that she "looked different," thus prompting her to begin the process of looking for more "mixed schools." Mark, a heterosexual father of

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an African American boy adopted via private domestic adoption, explained, “Our child would be more comfortable, I think, if there were more children of African descent, but the school can't really control that. Moving is on the table.” Notably, all of the participants who described a lack of racial diversity at their children's schools resided in non-metro areas in the US, highlighting how participants' community context may have shaped their access to diverse communities.

The fact that so few participants noted challenges with racial diversity may in part be related to choices that families made prior to enrolling their children in schools. For example, nine participants (eight lesbians, including one couple; one gay man), all of whom had adopted children of color, stated that they had prioritized racial diversity in the school selection process above other valued school qualities. For example, Julie, a lesbian who had adopted her biracial son via public adoption, acknowledged weighing the school's racial diversity more heavily than its academic rigor. She stated: “It is hard to find racial diversity and strong academics at the same [school]. The more diverse schools have lower income families and lower test scores, whereas the high scoring [schools have] predominantly white, upper class families.” Celia, a lesbian who had adopted her African American daughter via private domestic adoption, and who described her daughter's school as “very diverse,” noted that it was “extraordinarily difficult to find a school that was racially/ethnically diverse and affordable. It meant deprioritizing really important things like organic whole foods and arts exposure.”

In addition, five participants (two lesbian couples, one heterosexual woman) with children of color noted that they had moved prior to their children starting preschool, in part to access greater racial and ethnic diversity in their neighborhoods and schools. Additionally, two participants (one lesbian, one heterosexual woman) stated that they had specifically requested – and been granted – teachers of the same racial/ethnic background as their children. Heidi, a heterosexual woman who had adopted her daughter via international adoption, stated: We requested that our Latina daughter be placed in the only classroom with a Latina teacher and our request was taken seriously and it was honored by a school administration that rarely allows parents to influence their placement decisions. We feel that they understood our reasons for asking that our daughter have a role model that looks like her and they agreed it was valid.

Suggestions to Teachers and Schools

In addition to describing school-related challenges, some participants also provided suggestions for schools. Namely, 13% of gay men ($n = 10$), 35% of lesbians ($n = 28$), and 18% of heterosexual participants ($n = 20$) provided feedback and suggestions for school personnel, with some providing multiple suggestions. These suggestions fell into several major themes, all of which addressed various aspects of inclusion and diversity. Namely, their suggestions centered upon classroom discussion of diversity; inclusion of books on diversity; inclusive language; curricular inclusion of LG and adoption issues; increasing the diversity of the school population; and school events aimed at creating community and educating about diversity.

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Some participants called for *greater discussion of family diversity* in the preschool classroom. Specifically, discussion of two-mom and two-dad families was emphasized by nine participants (six lesbian women, three gay men). Gary, the gay father of a Latino boy adopted via public domestic adoption, for example, called for “more inclusion of family diversity, like more ‘two moms’ or ‘two dads’ stories and games, giving more of a sense of normalcy to that.” Likewise, more discussion of adoptive families was called for by seven participants (one lesbian woman, one gay man, five heterosexual women). Diane, the lesbian mother of a Caucasian girl who was adopted via private domestic adoption, asserted, “Discuss adoption as a positive in class. Don’t whisper the word adoption – be proud of it!” Likewise, Kellie, a heterosexual woman who had adopted her biracial son via private domestic adoption, emphasized the importance of “discussing adoption and foster care as routes to family building.”

Related to the recommendation for more discussion of diverse family structures, some parents urged teachers and schools to incorporate *more books on diverse families*. Specifically, eight participants (one lesbian couple, three lesbian women, three gay men) noted that schools should have more books on two-mom and two-dad families. In addition, three participants (two lesbian women, one heterosexual woman) suggested that schools include more books on adoption specifically, especially open adoption; and two participants, both heterosexual women, indicated a need for more books featuring children of color. Several of these participants noted that they felt that it should not be “on them” to provide such books; rather, it should be up to the schools to ensure that inclusive materials are present in the classroom. Charlotte, a lesbian who had adopted her Latino son via public domestic adoption, said, “I feel that adoptive education is on the adoptive families. Same with same-sex family education. We have to suggest [and] donate adoption and gay family books to the school library. The administration is open to suggestions, but we have to make them.” Vivian, a heterosexual woman who had adopted her Caucasian son via private domestic adoption, noted that while she was happy to donate books and educate teachers, she “[didn’t] have the energy to be a 24-hour PSA spokesperson for adoption!”

Explicit suggestions regarding *language use* were made by six participants (four lesbian women, two gay men), who requested that teachers and schools use non-heteronormative language that is accepting and inclusive (i.e., “don’t always say ‘moms and dads’”). Three of these participants also explicitly requested that forms be made inclusive of all families, including two-mother and two-father families, and one also suggested that children should be allowed to define their own families, and teachers should use their language.

Nine participants had suggestions regarding the *curriculum*, including “dos” and “don’ts.” Namely, four lesbian women suggested that all class projects be inclusive of all types of families, and four lesbian women and one gay man provided suggestions pertaining to the celebration of Mother’s Day and Father’s Day. These suggestions included the recommendation to “ask how child celebrates holidays, such as Mother’s Day and Father’s Day...children are usually permitted to make only one item, which makes the child feel that his/her family is excluded and therefore abnormal and weird” and “make Grandmother cards on Mother’s Day, and Daddy and Papa cards on Father’s Day.” In addition, two heterosexual

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women noted that family tree exercises should be voluntary and/or adapted to be inclusive of adoptive families.

Four participants (two lesbian women, two heterosexual women) suggested that schools should be doing more to create a *racially diverse school*. Delia, a heterosexual woman who had adopted her daughter from China, emphasized that schools “should work to have a racially diverse student body and faculty. It's important.” Gloria, a lesbian who had adopted her African American son via private domestic adoption, suggested that schools “reach out to families of color and expand the color/diversity of the school.”

Finally, some participants suggested events designed to educate and create community among parents. Namely, three heterosexual women suggested that schools should host adoption and culture-related events for parents and families, in order to bring greater awareness of these issues into the broader school community; and three lesbian women suggested community-building events (such as potlucks) that involved both parents and children so that, as one woman stated, “we can get to know each other and not avoid each other.”

Notably, most participants did not have specific suggestions to schools; these tended to be the same participants who did not volunteer any major challenges at their children's schools. “We have had no issues, so we have no suggestions,” was a commonly expressed sentiment.

Discussion

The current study represents one of the few investigations to explore the preschool experiences and challenges of LG and adoptive parents. The findings provide insights into the types of reformative steps that school administrators and teachers can make toward ensuring that their schools and classrooms are inclusive and affirming environments for all types of families.

Most parents described an open and proactive approach with regard to discussing the details of their family structure with their children's schools. First, most LG participants had addressed the fact that their child had two mothers or fathers with their children's schools. This finding is somewhat consistent with prior research indicating a greater overall trend toward openness and disclosure by LG parents with regard to their children's schools (Kosciw & Diaz, 2008; Mercier & Harold, 2003); it is also consistent with and perhaps reflects larger societal trends toward greater legal and social affirmation of LG parent families (Byard et al., 2013). Participants who had not disclosed their LG parent status to their children's teachers tended to state that it was “unnecessary” to do so; or, they did not explain their nondisclosure. It is possible that a reluctance to engage in potentially uncomfortable conversations with their children's teachers underlies these parents' non-disclosure, even if they did not speak to this issue. It is notable that all of the non-disclosing parents lived in non-metro areas, and half lived in the Southern part of the US. This, combined with prior work suggesting that LG parents in conservative and rural areas may be less likely to disclose their sexuality (Casper & Schultz, 1999; Lindsay et al., 2006), points

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to the salience of geographic and social context in shaping LG parents' openness about their sexuality.

Most LG and heterosexual participants had at least broached the topic of their child's adoption with their child's teacher. Among those who not to disclose, some participants – almost all of whom had adopted inracially – explained that the subject of their child's adoption had not come up or seemed unnecessary to share. Other participants – who had adopted transracially – noted that their child's adoptive status was “obvious” in explaining their nondisclosure. Thus, both apparent similarity to, and deviance from, the heterosexual biologically-related family ideal, were constructed as eliminating the need to speak about their child's adoption (Jacobson, 2009). Parents' resistance to directly broaching the topic of their child's adoption might also stem from underlying anxiety regarding how their children's teachers might react to this information, and the conversation(s) that might ensue. For parents who adopted inracially, for example, innocent remarks regarding adoption (“he looks just like you; no one would know you weren't his real parent”) may be feared or anticipated, and thus avoided (Stroud, Stroud, & Staley, 1997). As we saw, parents sometimes reported biased treatment by teachers, who seemed to attribute all behavioral issues to their children's adoptive status. Thus, some parents may have stayed silent about their children's adoption so as not to bias their teachers against their children.

Most LG parents did not report challenges related to their family structure. This may, in part, reflect the fact that many LG parents prioritize gay-friendliness in choosing a school (Goldberg & Smith, 2014; Kosciw & Diaz, 2008). By extension, it may reflect the impact of financial resources on parents' school choice and selection, whereby the sample's relatively high incomes enabled them to select progressive and seemingly gay-friendly schools where their families would be less vulnerable to marginalization and exclusion (Lindsay et al., 2006).

Parents who did report challenges largely described implicit forms of marginalization; few explicit examples of homophobia were cited. For example, some parents cited teachers' lack of experience with LG parents as a challenge; such inexperience was particularly salient among LG parents living in non-metro areas, which again highlights the role of geographic context in LG parents' school experiences, and echoes patterns documented in some prior qualitative research with lesbian parent families (Casper & Schultz, 1999; Lindsay et al., 2006). As Lindsay et al. (2006) observed, in their study of 20 lesbian parent families in Australia, “families who live in a generally more open minded, inner city suburb that is both cosmopolitan and diverse ha[ve] a better chance of having positive experiences within the school setting” (p. 1035).

Schools' lack of experience and unfamiliarity with LG parents was sometimes reflected in the language used by teachers and schools (e.g., in the classrooms, and in paperwork; Byard et al., 2013). This is consistent with prior research on LG parents of school-age children (Kosciw & Diaz, 2008), suggesting that teacher preparation surrounding LGBT family issues should include, and begin with, early childhood educators (Kintner-Duffy et al., 2012). By helping early childhood educators to become more comfortable and inclusive with regard to LG parent families, stronger relationships between LG parents and their children's

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schools may be fostered (Byard et al., 2013). Other parents' lack of comfort with LG parents was described as a challenge by a few participants, echoing prior research on LGBT parents of school-age children (Kosciw & Diaz, 2008), and indicating the potential need for school community-building activities to begin early, in order to prevent parent avoidance or fear of other parents. Notably, all of the LG parents who described challenges with other parents were Caucasian and had adopted children of color, suggesting that school efforts to bridge differences across family structure should be sensitive to the ways in which multiracial families may be viewed by some parents as strange or unfamiliar.

Likewise, most of the challenges that parents named related to adoption concerned more implicit manifestations of adoption, as opposed to explicit anti-adoption bias, reflecting the subtle ways in which adoption stigma continues to permeate the attitudes and practices of members of society (Goldberg et al., 2011). Insensitivity to the role of adoption in children's development or behavioral presentation, as well as inappropriate or exaggerated attribution of their children's challenges to adoption, were both described. This raises the question of how teachers should approach children's adoptive status, given that parents may be sensitive to both under appreciation of, and over focusing on, the role of adoption in children's lives. It is important that teachers seek to avoid inadvertent discrimination against adopted children. They should be careful to recognize their own biases or stereotypes regarding adoption (including open adoption and transracial adoption), and should seek to correct such assumptions through education (e.g., reading the empirical research on adoption; attending adoption webinars or conferences). Teachers should also seek to sensitively obtain as much detail regarding the adoption as the family feels comfortable sharing. If teachers approach the family with an attitude of nonjudgmental empathy, parents will likely be more open to disclosing adoption information, and less concerned about the implications of doing so (i.e., they will be less concerned that information about their child's adoptive history will be used against them or their child).

At the same time that teachers should guard against assumptions regarding adoption and its effects on children, they should recognize that, in some cases, children may exhibit temporary stress reactions related to their adoptive experience, which may manifest as behavioral problems (Taymans et al., 2008). Further, they should not overlook the potential significance of early or multiple transitions in caregiving environments, or abuse/neglect, in children's development (Howard et al., 2004). As we saw, the parents of children adopted via foster care or from abroad were especially likely to feel that teachers did not understand the role of pre-adoption adversity in their children's behavior. Teacher training on these issues is warranted, particularly at the early childhood level, when the effects of such adversity may be most likely to manifest.

Some parents highlighted how teachers' language and practices communicated insensitivity to and devaluing of adoption family relationships. As Meese (2012) points out, teachers' choice of words convey their attitudes and beliefs (e.g., about what is considered a "real" family or parent). In turn, teachers should ideally take care to use positive and sensitive adoption language, so as not to give the impression that, for example, only biological parents are "real" parents. Instead of referring to the child's parents as their adoptive parents, or suggesting that they are "like" family members, for example, teachers should refer to them

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as the child's parents and never give the impression that these relationships are less authentic or meaningful than biological family ties. In fact, it is usually appropriate to simply refer to the adoptive parents as mom/dad/parents; it is rarely relevant to add the qualifier “adoptive” (Mitchell, 2007).

Especially notable in this study was parents' emphasis on teachers' ignorance of open adoption. As open adoption becomes more common (Siegel & Smith, 2013), teachers will increasingly be challenged to gain education about the nuances of open adoption, and to develop a respectful stance in relation to all members of the adoption triad (adoptive parents, adopted children, and birth parents). At the same time, teachers must be careful to acknowledge the spectrum of adoption arrangements; that is, they should be aware of and communicate understanding of both closed and open adoption arrangements, so as not to alienate families that may not have access to, or may have chosen not to contact, birth family members.

Some parents identified a lack of racial diversity and sensitivity in their children's schools as a challenge. These parents had all adopted children of color, echoing prior work showing that concerns related to the racial diversity of the school tend to be heightened among lesbian and heterosexual parents who adopt children of color (Goldberg & Smith, 2014; Mercier & Harold, 2003). Further of note is that most of these parents resided in non-metro areas. Parents who live in non-urban settings may have to work harder to ensure that their children are exposed to other children whose racial backgrounds mirror their own (Goldberg, 2009). Inasmuch as some parents hinted at the possibility of switching schools in the future, research should examine how parents' choices regarding schooling may shift over time, particularly as their children develop greater racial consciousness. Indeed, some of the parents who did not report race-related challenges at their children's schools noted that they had recently relocated, at least in part to access more racially diverse schools and communities. Their decision to move – which was inevitably facilitated by access to social and financial resources – appeared to facilitate a more positive experience with regard to the racial diversity, inclusion, and sensitivity of the school.

One of the most useful findings in this study concerns parents' recommendations to teachers about how to create more inclusive school communities. Parents emphasized the importance of incorporating discussions of family diversity into the curriculum, and the use of inclusive books in the classroom. Books in particular may be a valuable way for preschool-aged children to learn about diverse families – although to be effective, they should ideally be read and taught alongside broader classroom discussions about diversity. As Mattix and Crawford (2011) note, “quality literature provides a sociocultural context in which social issues can be examined and a means by which to explore the worlds of self and others” (pp. 319–320). Further, such books can help to dispel prejudice and build community, by providing children with “enthraling stories” that help them to imagine the lives of others (Mattix & Crawford, 2011, p. 320). Several parents also pointed out that they were somewhat resentful of having to be the “spokesperson” for all things adoption. They wished that school personnel would take responsibility for ensuring that classrooms were equipped with materials that were responsive to adoptive, multiracial, and LG-parent families, so that they did not have to work so hard on behalf of their child. In this way, schools can relieve

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some of the burden that LG and adoptive parents carry, with respect to proactively advocating on behalf of their children in order to avoid marginalization.

Some participants also suggested adaptation of activities and assignments to be more inclusive of diverse families. Mother's Day and Father's Day assignments can create anxiety for LG parents (as well as single parents), but can be modified in such a way that accommodates diverse families. Schools might choose to celebrate Parents Day, on a date that falls in between Mother's Day and Father's Day, and children should always be allowed to make cards/gifts for as many parents or important adults as they choose. Likewise, assignments such as bringing in a baby picture may heighten anxiety for children who were adopted. Such assignments can easily be adapted (e.g., children can be encouraged to bring in a favorite picture, regardless of how old they were at the time; Meese, 2012). Likewise, educators can seek to teach children about the varieties of family structures by offering children alternatives to the traditional family tree assignment (e.g., The Rooted Family Tree, where the roots represent the birth family, the child is the trunk, and the foster, adoptive, and/or step family members fill in the branches; Mitchell, 2007).

Some parents recommended that schools make a concerted effort to reach out to families of color, as they believed that this might help create a more diverse school community, ultimately helping their own families to feel less alone. While seeking to increase the racial and cultural diversity of early childhood settings is a valuable goal, empirical studies have found that simplistic attempts to do so (i.e., in the absence of racial and cultural competence on the part of school personnel) may be unsuccessful in creating a school climate that values inclusion and diversity (Sanders & Downer, 2012). Thus, alongside efforts to increase racial/ethnic diversity, changes may also need to be made with regard to the curriculum, teacher attitudes, and school goals (Falconer & Byrnes, 2003; Sanders & Downer, 2012). Comprehensive diversity training programs that aim to increase awareness of diversity issues, heighten dialogue about such issues, and teach skills in competently interfacing with diverse families, may be helpful in changing the school climate (DeLisa & Lindenthal, 2012; Plummer, 1998).

Finally, several participants highlighted the importance of creating a sense of community among parents via activities such as potlucks and other events. They hoped that by providing opportunities for connection, schools could help their fellow parents to feel more at ease with them as adoptive and LG parent families. Schools may indirectly benefit themselves by creating such opportunities: Prior research has found that when parents feel connected to other parents at their children's school, this enhances their school engagement and involvement (Durand, 2011).

Limitations

This study has several notable limitations. First, the sample was largely well-educated, financially well-off, and mostly Caucasian. LG parents with less education may be less "out" to schools (Nixon, 2011) and may encounter unique difficulties in terms of advocating for their children. Second, the sample was not nationally representative. Because of the biases associated with self-selection, the findings cannot be viewed as representative of any particular group. Third, the study examined only the perspectives of adoptive parents, not

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teachers or children; that is, there was no triangulation of the data from multiple informants, which limits the richness and depth of the findings (Patton, 2002). Future work might, for example, examine parents' perspectives alongside early childhood educators' perspectives on interacting with LG and adoptive parents (Kintner-Duffy et al., 2012).

Fourth, we focused on parents' experiences in the preschool setting at only one point in time. Future work is needed that examines LG and adoptive parents' interactions with schools over time. Such research can help to establish how, for example, parents' experiences in the preschool setting set the stage for later school experiences, including their school involvement. Fifth, because parents responded to open-ended questionnaires in written form, the length and detail of participants' responses varied. In turn, the data were likely not as in-depth as data obtained in the context of open-ended interviews. At the same time, content analysis of open-ended survey data can be an important means of generating ideas and hypotheses to be followed up in future research (Porter, van Teijlingen, Chi Ying Yip, & Bhattacharya, 2007). Sixth, many of the questions parents were asked (e.g., about school-related challenges) were fairly general. A benefit of this approach is that such questions are likely to end up reflecting parents' concerns, rather than simply reflecting the researcher's concerns and hypotheses (Creswell, 2008). Yet, a drawback of asking general questions is that the themes that emerge may underrepresent certain phenomena. For example, we did not ask explicitly about mistreatment by other parents. Thus, it is perhaps not surprising that only a handful of parents described this, compared to 26% of the parents in the GLSEN survey, who were asked directly about this topic (Kosciw & Diaz, 2008). Finally, the ethnicities of the children in the study varied widely, making it difficult to identify patterns within subgroups. Thus, while we note patterns that were evident among parents of adopted children of color, it was difficult to go further than this due to the small number of children of any particular ethnicity (e.g., in a given theme, there might be only two children who shared the same ethnicity).

Conclusions

This study builds on the little existing research on the school-related perceptions and experiences of LG parents (Kosciw & Diaz, 2008) and adoptive parents (Nowak-Fabrykowski et al., 2009). The findings suggest that most parents were open about their family structure with their children's schools, and few reported sexuality-, adoption-, or race-related challenges at their children's schools. However, some parents did report challenges, and their experiences highlight the need for all early childhood educators to receive preparation for working with diverse families (Kintner-Duffy et al., 2012; Robinson, 2002). Further, the findings point to a number of practical strategies that schools can implement to ensure affirming treatment of LG and adoptive parent families as well as curricular inclusion of LG and adoptive family experiences. At the very least, early childhood educators are encouraged to (a) seek professional training on diverse families (e.g., attend workshops and read books on diverse families); (b) use inclusive language in the classroom and on school forms (e.g., refer to "parents"; have room on school forms for Parent 1, and Parent 2 – and possibly Parent 3 and Parent 4, to accommodate more complex families); (c) provide examples of LG and adoptive families when referencing families in the classroom; (d) use books and classroom materials that are inclusive of diverse families; and (e) celebrate events

(e.g., Adoption Month) that can provide a platform for educating children, their parents, and school personnel about diverse families. In turn, future work can examine the effectiveness of such interventions, from the perspectives of teachers, parents, and children.

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Research highlights

- This study examined sexual minority and heterosexual adoptive parents of preschoolers.
- Most parents were open about their LG and adoptive family status, and had not encountered challenges.
- Parents who experienced challenges typically described implicit forms of marginalization (e.g., insensitive language).
- Parents' suggestions for teachers included reading about, and tailoring assignments to meet the needs of, diverse families.

Table 1

Final Coding Scheme

	Lesbians (n = 79)	Gay Men (n = 75)	Heterosexual Parents (n = 112)
Disclosure-LG Status			
Disclosed	70 (89%)	68 (91%)	n/a
Did Not Disclose	9 (11%)	7 (9%)	n/a
Disclosure-Adoptive Status			
Disclosed	73 (92%)	67 (89%)	93 (83%)
Did Not Disclose	6 (8%)	8 (11%)	19 (17%)
No Need	2	4	5
Hasn't Come Up	1	2	3
It is Obvious	-	2	2
No Explanation	3	-	9
Challenges re: LG Status			
No Challenges	59 (75%)	67 (89%)	n/a
Challenges	20 (25%)	8 (11%)	n/a
Teacher Inexperience with LG	6	2	n/a
Heterosexist Language	7	-	n/a
Discomfort with LG	4	3	n/a
Homophobic Incidents	3	2	n/a
Other Parents	3	1	n/a
Challenges re: Adoptive Status			
No Challenges	63 (80%)	72 (96%)	83 (74%)
Challenges	16 (20%)	3 (4%)	29 (26%)
Teacher Inexperience re: Adoption	4	3	5
Adoption-Insensitive Language	3	-	5
Curriculum Issues re: Adoption	1	-	4
Inattention to Adoption, Child Behavior	6	-	12
Over focusing on Adoption, Child Behavior	2	-	7
Uncertainty re: Sharing of Adoption Info	2	-	5
Challenges re: Race			
No Challenges	72 (92%)	72 (96%)	105 (94%)
Challenges	6 (8%)	3 (4%)	7 (6%)
Teacher Inexperience re: Race	3	2	1
Lack of Racial Diversity	3	1	6
Suggestions to Schools			
Discussion of Family Diversity			
LG Parent Families	6	3	-
Adoptive Families	1	1	5
Books on Diverse Families			
LG Parent Families	5	3	-
Adoption	2	-	1

	Lesbians (<i>n</i> = 79)	Gay Men (<i>n</i> = 75)	Heterosexual Parents (<i>n</i> = 112)
Children of Color	-	-	2
Inclusive, Non-Heteronormative Language	4	2	-
Curriculum			
Inclusive Class Projects	4	-	-
Mother's Day/Father's Day	4	1	-
Racially Diverse School	2	-	2
School Events	3	-	3



This Technical Report was retired November 2021.

TECHNICAL REPORT

The Lifelong Effects of Early Childhood Adversity and Toxic Stress

abstract

FREE

Advances in fields of inquiry as diverse as neuroscience, molecular biology, genomics, developmental psychology, epidemiology, sociology, and economics are catalyzing an important paradigm shift in our understanding of health and disease across the lifespan. This converging, multidisciplinary science of human development has profound implications for our ability to enhance the life prospects of children and to strengthen the social and economic fabric of society. Drawing on these multiple streams of investigation, this report presents an ecobiodevelopmental framework that illustrates how early experiences and environmental influences can leave a lasting signature on the genetic predispositions that affect emerging brain architecture and long-term health. The report also examines extensive evidence of the disruptive impacts of toxic stress, offering intriguing insights into causal mechanisms that link early adversity to later impairments in learning, behavior, and both physical and mental well-being. The implications of this framework for the practice of medicine, in general, and pediatrics, specifically, are potentially transformational. They suggest that many adult diseases should be viewed as developmental disorders that begin early in life and that persistent health disparities associated with poverty, discrimination, or maltreatment could be reduced by the alleviation of toxic stress in childhood. An ecobiodevelopmental framework also underscores the need for new thinking about the focus and boundaries of pediatric practice. It calls for pediatricians to serve as both front-line guardians of healthy child development and strategically positioned, community leaders to inform new science-based strategies that build strong foundations for educational achievement, economic productivity, responsible citizenship, and lifelong health. *Pediatrics* 2012;129:e232–e246

INTRODUCTION

Of a good beginning cometh a good end.

John Heywood, *Proverbs* (1546)

The United States, like all nations of the world, is facing a number of social and economic challenges that must be met to secure a promising future. Central to this task is the need to produce a well-educated and healthy adult population that is sufficiently skilled to participate effectively in a global economy and to become responsible stakeholders in a productive society. As concerns continue to grow about the quality of public education and its capacity to prepare the nation's future workforce, increasing investments are being made in

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KEY WORDS

ecobiodevelopmental framework, new morbidity, toxic stress, social inequalities, health disparities, health promotion, disease prevention, advocacy, brain development, human capital development, pediatric basic science

ABBREVIATIONS

ACE—adverse childhood experiences
CRH—corticotropin-releasing hormone
EBD—ecobiodevelopmental
PFC—prefrontal cortex

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the preschool years to promote the foundations of learning. Although debates about early childhood policy focus almost entirely on educational objectives, science indicates that sound investments in interventions that reduce adversity are also likely to strengthen the foundations of physical and mental health, which would generate even larger returns to all of society.^{1,2} This growing scientific understanding about the common roots of health, learning, and behavior in the early years of life presents a potentially transformational opportunity for the future of pediatrics.

Identifying the origins of adult disease and addressing them early in life are critical steps toward changing our current health care system from a “sick-care” to a “well-care” model.^{3–5} Although new discoveries in basic science, clinical subspecialties, and high-technology medical interventions continue to advance our capacity to treat patients who are ill, there is growing appreciation that a successful well-care system must expand its scope beyond the traditional realm of individualized, clinical practice to address the complex social, economic, cultural, environmental, and developmental influences that lead to population-based health disparities and unsustainable medical care expenditures.^{2,6,7} The science of early childhood development has much to offer in the realization of this vision, and the well-being of young children and their families is emerging as a promising focus for creative investment.

The history of pediatrics conveys a rich narrative of empirical investigation and pragmatic problem solving. Its emergence as a specialized domain of clinical medicine in the late 19th century was dominated by concerns about nutrition, infectious disease, and premature death. In the middle of

the 20th century, as effective vaccines, antibiotics, hygiene, and other public health measures confronted the infectious etiologies of childhood illness, a variety of developmental, behavioral, and family difficulties became known as the “new morbidities.”⁸ By the end of the century, mood disorders, parental substance abuse, and exposure to violence, among other conditions, began to receive increasing attention in the pediatric clinical setting and became known as the “newer morbidities.”⁹ Most recently, increasingly complex mental health concerns; the adverse effects of television viewing; the influence of new technologies; epidemic increases in obesity; and persistent economic, racial, and ethnic disparities in health status have been called the “millennial morbidities.”¹⁰

Advances in the biological, developmental, and social sciences now offer tools to write the next important chapter. The overlapping and synergistic characteristics of the most prevalent conditions and threats to child well-being—combined with the remarkable pace of new discoveries in developmental neuroscience, genomics, and the behavioral and social sciences—present an opportunity to confront a number of important questions with fresh information and a new perspective. What are the biological mechanisms that explain the well-documented association between childhood adversity and adult health impairment? As these causal mechanisms are better elucidated, what can the medical field, specifically, and society, more generally, do to reduce or mitigate the effects of disruptive early-life influences on the origins of lifelong disease? When is the optimal time for those interventions to be implemented?

This technical report addresses these important questions in 3 ways. First, it presents a scientifically grounded,

ecobiodevelopmental (EBD) framework to stimulate fresh thinking about the promotion of health and prevention of disease across the lifespan. Second, it applies this EBD framework to better understand the complex relationships among adverse childhood circumstances, toxic stress, brain architecture, and poor physical and mental health well into adulthood. Third, it proposes a new role for pediatricians to promote the development and implementation of science-based strategies to reduce toxic stress in early childhood as a means of preventing or reducing many of society’s most complex and enduring problems, which are frequently associated with disparities in learning, behavior, and health. The magnitude of this latter challenge cannot be overstated. A recent technical report from the American Academy of Pediatrics reviewed 58 years of published studies and characterized racial and ethnic disparities in children’s health to be extensive, pervasive, persistent, and, in some cases, worsening.¹¹ Moreover, the report found only 2 studies that evaluated interventions designed to reduce disparities in children’s health status and health care that also compared the minority group to a white group, and none used a randomized controlled trial design.

The causal sequences of risk that contribute to demographic differences in educational achievement and physical well-being threaten our country’s democratic ideals by undermining the national credo of equal opportunity. Unhealthy communities with too many fast food franchises and liquor stores, yet far too few fresh food outlets and opportunities for physical activity, contribute to an unhealthy population. Unemployment and forced mobility disrupt the social networks that stabilize communities and families and, thereby, lead to higher rates of violence

and school dropout. The purpose of this technical report is to leverage new knowledge from the biological and social sciences to help achieve the positive life outcomes that could be accrued to all of society if more effective strategies were developed to reduce the exposure of young children to significant adversity.

A NEW FRAMEWORK FOR PROMOTING HEALTHY DEVELOPMENT

Advances in our understanding of the factors that either promote or undermine early human development have set the stage for a significant paradigm shift.¹² In simple terms, the process of development is now understood as a function of “nature dancing with nurture over time,” in contrast to the longstanding but now outdated debate about the influence of “nature versus nurture.”¹³ That is to say, beginning prenatally, continuing through infancy, and extending into childhood and beyond, development is driven by an ongoing, inextricable interaction between biology (as defined by genetic predispositions) and ecology (as defined by the social and physical environment)^{12,14,15} (see Fig 1).

Building on an ecological model that explains multiple levels of influence on psychological development,¹⁶ and a recently proposed biodevelopmental framework that offers an integrated, science-based approach to coordinated, early childhood policy making and practice across sectors,¹⁷ this technical report presents an EBD framework that draws on a recent report from the Center on the Developing Child at Harvard University to help physicians and policy makers think about how early childhood adversity can lead to lifelong impairments in learning, behavior, and both physical and mental health.^{1,6}

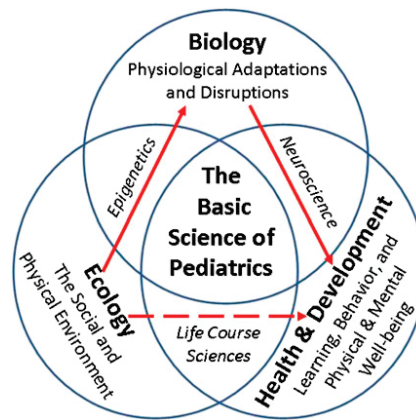


FIGURE 1

The basic science of pediatrics. An emerging, multidisciplinary science of development supports an EBD framework for understanding the evolution of human health and disease across the life span. In recent decades, epidemiology, developmental psychology, and longitudinal studies of early childhood interventions have demonstrated significant associations (hashed red arrow) between the ecology of childhood and a wide range of developmental outcomes and life course trajectories. Concurrently, advances in the biological sciences, particularly in developmental neuroscience and epigenetics, have made parallel progress in beginning to elucidate the biological mechanisms (solid arrows) underlying these important associations. The convergence of these diverse disciplines defines a promising new basic science of pediatrics.

Some of the most compelling new evidence for this proposed framework comes from the rapidly moving field of epigenetics, which investigates the molecular biological mechanisms (such as DNA methylation and histone acetylation) that affect gene expression without altering DNA sequence. For example, studies of maternal care in rats indicate that differences in the quality of nurturing affect neural function in pups and negatively affect cognition and the expression of psychopathology later in life. Moreover, rats whose mothers showed increased levels of licking and grooming during their first week of life also showed less exaggerated stress responses as adults compared with rats who were reared by mothers with a low level of licking and grooming, and the expression of mother-pup interactions in the pups

has been demonstrated to be passed on to the next generation.^{18–22} This burgeoning area of research is challenging us to look beyond genetic predispositions to examine how environmental influences and early experiences affect when, how, and to what degree different genes are actually activated, thereby elucidating the mechanistic linkages through which gene-environment interaction can affect lifelong behavior, development, and health (see Fig 1).

Additional evidence for the proposed framework comes from insights accrued during the “Decade of the Brain” in the 1990s, when the National Institutes of Health invested significant resources into understanding both normal and pathologic neuronal development and function. Subsequent advances in developmental neuroscience have begun to describe further, in some cases at the molecular and cellular levels, how an integrated, functioning network with billions of neurons and trillions of connections is assembled. Because this network serves as the biological platform for a child’s emerging social-emotional, linguistic, and cognitive skills, developmental neuroscience is also beginning to clarify the underlying causal mechanisms that explain the normative process of child development. In a parallel fashion, longitudinal studies that document the long-term consequences of childhood adversity indicate that alterations in a child’s ecology can have measurable effects on his or her developmental trajectory, with lifelong consequences for educational achievement, economic productivity, health status, and longevity.^{23–27}

The EBD framework described in this article presents a new way to think about the underlying biological mechanisms that explain this robust link between early life adversities (ie, the

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new morbidities of childhood) and important adult outcomes. The innovation of this approach lies in its mobilization of dramatic scientific advances in the service of rethinking basic notions of health promotion and disease prevention within a fully integrated, life span perspective from conception to old age.⁶ In this context, significant stress in the lives of young children is viewed as a risk factor for the genesis of health-threatening behaviors as well as a catalyst for physiologic responses that can lay the groundwork for chronic, stress-related diseases later in life.

Understanding the Biology of Stress

Although genetic variability clearly plays a role in stress reactivity, early experiences and environmental influences can have considerable impact. Beginning as early as the prenatal period, both animal^{28–30} and human^{31,32} studies suggest that fetal exposure to maternal stress can influence later stress responsiveness. In animals, this effect has been demonstrated not only in the offspring of the studied pregnancy but also in subsequent generations. The precise biological mechanisms that explain these findings remain to be elucidated, but epigenetic modifications of DNA appear likely to play a role.^{31,33,34} Early postnatal experiences with adversity are also thought to affect future reactivity to stress, perhaps by altering the developing neural circuits controlling these neuroendocrine responses.^{34,35} Although much research remains to be performed in this area, there is a strong scientific consensus that the ecological context modulates the expression of one's genotype. It is as if experiences confer a "signature" on the genome to authorize certain characteristics and behaviors and to prohibit others. This concept

underscores the need for greater understanding of how stress "gets under the skin," as well as the importance of determining what external and internal factors can be mobilized to prevent that embedding process or protect against the consequences of its activation.

Physiologic responses to stress are well defined.^{36–38} The most extensively studied involve activation of the hypothalamic-pituitary-adrenocortical axis and the sympathetic-adrenomedullary system, which results in increased levels of stress hormones, such as corticotropin-releasing hormone (CRH), cortisol, norepinephrine, and adrenaline. These changes co-occur with a network of other mediators that include elevated inflammatory cytokines and the response of the parasympathetic nervous system, which counterbalances both sympathetic activation and inflammatory responses. Whereas transient increases in these stress hormones are protective and even essential for survival, excessively high levels or prolonged exposures can be quite harmful or frankly toxic,^{39–41} and the dysregulation of this network of physiologic mediators (eg, too much or too little cortisol; too much or too little inflammatory response) can lead to a chronic "wear and tear" effect on multiple organ systems, including the brain.^{39–41} This cumulative, stress-induced burden on overall body functioning and the aggregated costs, both physiologic and psychological, required for coping and returning to homeostatic balance, have been referred to as "allostatic load."^{38,42–44} The dynamics of these stress-mediating systems are such that their overactivation in the context of repeated or chronic adversity leads to alterations in their regulation.

The National Scientific Council on the Developing Child has proposed

a conceptual taxonomy comprising 3 distinct types of stress responses (in contrast to the actual stressors themselves) in young children—positive, tolerable, and toxic—on the basis of postulated differences in their potential to cause enduring physiologic disruptions as a result of the intensity and duration of the response.^{17,45} A positive stress response refers to a physiologic state that is brief and mild to moderate in magnitude. Central to the notion of positive stress is the availability of a caring and responsive adult who helps the child cope with the stressor, thereby providing a protective effect that facilitates the return of the stress response systems back to baseline status. Examples of precipitants of a positive stress response in young children include dealing with frustration, getting an immunization, and the anxiety associated with the first day at a child care center. When buffered by an environment of stable and supportive relationships, positive stress responses are a growth-promoting element of normal development. As such, they provide important opportunities to observe, learn, and practice healthy, adaptive responses to adverse experiences.

A tolerable stress response, in contrast to positive stress, is associated with exposure to nonnormative experiences that present a greater magnitude of adversity or threat. Precipitants may include the death of a family member, a serious illness or injury, a contentious divorce, a natural disaster, or an act of terrorism. When experienced in the context of buffering protection provided by supportive adults, the risk that such circumstances will produce excessive activation of the stress response systems that leads to physiologic harm and long-term consequences for health and learning is greatly

reduced. Thus, the essential characteristic that makes this form of stress response tolerable is the extent to which protective adult relationships facilitate the child's adaptive coping and a sense of control, thereby reducing the physiologic stress response and promoting a return to baseline status.

The third and most dangerous form of stress response, toxic stress, can result from strong, frequent, or prolonged activation of the body's stress response systems in the absence of the buffering protection of a supportive, adult relationship. The risk factors studied in the Adverse Childhood Experiences Study²³ include examples of multiple stressors (eg, child abuse or neglect, parental substance abuse, and maternal depression) that are capable of inducing a toxic stress response. The essential characteristic of this phenomenon is the postulated disruption of brain circuitry and other organ and metabolic systems during sensitive developmental periods. Such disruption may result in anatomic changes and/or physiologic dysregulations that are the precursors of later impairments in learning and behavior as well as the roots of chronic, stress-related physical and mental illness. The potential role of toxic stress and early life adversity in the pathogenesis of health disparities underscores the importance of effective surveillance for significant risk factors in the primary health care setting. More important, however, is the need for clinical pediatrics to move beyond the level of risk factor identification and to leverage advances in the biology of adversity to contribute to the critical task of developing, testing, and refining new and more effective strategies for reducing toxic stress and mitigating its effects as early as possible, before irrevocable damage is done. Stated simply, the next chapter of innovation

in pediatrics remains to be written, but the outline and plot are clear.

Toxic Stress and the Developing Brain

In addition to short-term changes in observable behavior, toxic stress in young children can lead to less outwardly visible yet permanent changes in brain structure and function.^{39,46} The plasticity of the fetal, infant, and early childhood brain makes it particularly sensitive to chemical influences, and there is growing evidence from both animal and human studies that persistently elevated levels of stress hormones can disrupt its developing architecture.⁴⁵ For example, abundant glucocorticoid receptors are found in the amygdala, hippocampus, and prefrontal cortex (PFC), and exposure to stressful experiences has been shown to alter the size and neuronal architecture of these areas as well as lead to functional differences in learning, memory, and aspects of executive functioning. More specifically, chronic stress is associated with hypertrophy and overactivity in the amygdala and orbitofrontal cortex, whereas comparable levels of adversity can lead to loss of neurons and neural connections in the hippocampus and medial PFC. The functional consequences of these structural changes include more anxiety related to both hyperactivation of the amygdala and less top-down control as a result of PFC atrophy as well as impaired memory and mood control as a consequence of hippocampal reduction.⁴⁷ Thus, the developing architecture of the brain can be impaired in numerous ways that create a weak foundation for later learning, behavior, and health.

Along with its role in mediating fear and anxiety, the amygdala is also an activator of the physiologic stress response. Its stimulation activates

sympathetic activity and causes neurons in the hypothalamus to release CRH. CRH, in turn, signals the pituitary to release adrenocorticotrophic hormone, which then stimulates the adrenal glands to increase serum cortisol concentrations. The amygdala contains large numbers of both CRH and glucocorticoid receptors, beginning early in life, which facilitate the establishment of a positive feedback loop. Significant stress in early childhood can trigger amygdala hypertrophy and result in a hyperresponsive or chronically activated physiologic stress response, along with increased potential for fear and anxiety.^{48,49} It is in this way that a child's environment and early experiences get under the skin.

Although the hippocampus can turn off elevated cortisol, chronic stress diminishes its capacity to do so and can lead to impairments in memory and mood-related functions that are located in this brain region. Exposure to chronic stress and high levels of cortisol also inhibit neurogenesis in the hippocampus, which is believed to play an important role in the encoding of memory and other functions. Furthermore, toxic stress limits the ability of the hippocampus to promote contextual learning, making it more difficult to discriminate conditions for which there may be danger versus safety, as is common in posttraumatic stress disorder. Hence, altered brain architecture in response to toxic stress in early childhood could explain, at least in part, the strong association between early adverse experiences and subsequent problems in the development of linguistic, cognitive, and social-emotional skills, all of which are inextricably intertwined in the wiring of the developing brain.⁴⁵

The PFC also participates in turning off the cortisol response and has an important role in the top-down

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regulation of autonomic balance (ie, sympathetic versus parasympathetic effects), as well as in the development of executive functions, such as decision-making, working memory, behavioral self-regulation, and mood and impulse control. The PFC is also known to suppress amygdala activity, allowing for more adaptive responses to potentially threatening or stressful experiences; however, exposure to stress and elevated cortisol results in dramatic changes in the connectivity within the PFC, which may limit its ability to inhibit amygdala activity and, thereby, impair adaptive responses to stress. Because the hippocampus and PFC both play a significant role in modulating the amygdala's initiation of the stress response, toxic stress-induced changes in architecture and connectivity within and between these important areas might account for the variability seen in stress-responsiveness.⁵⁰ This can then result in some children appearing to be both more reactive to even mildly adverse experiences and less capable of effectively coping with future stress.^{36,37,45,51}

Toxic Stress and the Early Childhood Roots of Lifelong Impairments in Physical and Mental Health

As described in the previous section, stress-induced changes in the architecture of different regions of the developing brain (eg, amygdala, hippocampus, and PFC) can have potentially permanent effects on a range of important functions, such as regulating stress physiology, learning new skills, and developing the capacity to make healthy adaptations to future adversity.^{52,53} As the scientific evidence for these associations has become better known and has been disseminated more widely, its implications for early childhood policy and programs have become increasingly

appreciated by decision makers across the political spectrum. Notwithstanding this growing awareness, however, discussions about early brain development in policy-making circles have focused almost entirely on issues concerned with school readiness as a prerequisite for later academic achievement and the development of a skilled adult workforce. Within this same context, the health dimension of early childhood policy has focused largely on the traditional components of primary pediatric care, such as immunizations, early identification of sensory impairments and developmental delays, and the prompt diagnosis and treatment of medical problems. That said, as advances in the biomedical sciences have generated growing evidence linking biological disruptions associated with adverse childhood experiences (ACE) to greater risk for a variety of chronic diseases well into the adult years, the need to reconceptualize the health dimension of early childhood policy has become increasingly clear.^{1,6} Stated simply, the time has come to expand the public's understanding of brain development and shine a bright light on its relation to the early childhood roots of adult disease and to examine the compelling implications of this growing knowledge base for the future of pediatric practice.

The potential consequences of toxic stress in early childhood for the pathogenesis of adult disease are considerable. At the behavioral level, there is extensive evidence of a strong link between early adversity and a wide range of health-threatening behaviors. At the biological level, there is growing documentation of the extent to which both the cumulative burden of stress over time (eg, from chronic maltreatment) and the timing of specific environmental insults during

sensitive developmental periods (eg, from first trimester rubella or pre-natal alcohol exposure) can create structural and functional disruptions that lead to a wide range of physical and mental illnesses later in adult life.^{1,6} A selective overview of this extensive scientific literature is provided below.

The association between ACE and unhealthy adult lifestyles has been well documented. Adolescents with a history of multiple risk factors are more likely to initiate drinking alcohol at a younger age and are more likely to use alcohol as a means of coping with stress than for social reasons.⁵⁴ The adoption of unhealthy lifestyles as a coping mechanism might also explain why higher ACE exposures are associated with tobacco use, illicit drug abuse, obesity, and promiscuity,^{55,56} as well as why the risk of pathologic gambling is increased in adults who were maltreated as children.⁵⁷ Adolescents and adults who manifest higher rates of risk-taking behaviors are also more likely to have trouble maintaining supportive social networks and are at higher risk of school failure, gang membership, unemployment, poverty, homelessness, violent crime, incarceration, and becoming single parents. Furthermore, adults in this high-risk group who become parents themselves are less likely to be able to provide the kind of stable and supportive relationships that are needed to protect their children from the damages of toxic stress. This intergenerational cycle of significant adversity, with its predictable repetition of limited educational achievement and poor health, is mediated, at least in part, by the social inequalities and disrupted social networks that contribute to fragile families and parenting difficulties.^{7,58,59}

The adoption of unhealthy lifestyles and associated exacerbation of socioeconomic inequalities are potent

risk factors for poor health. Up to 40% of early deaths have been estimated to be the result of behavioral or lifestyle patterns,³ and 1 interpretation of the ACE study data is that toxic stress in childhood is associated with the adoption of unhealthy lifestyles as a coping mechanism.⁶⁰ An additional 25% to 30% of early deaths are thought to be attributable to either inadequacies in medical care³ or socioeconomic circumstances, many of which are known to contribute to health care–related disparities.^{61–67}

Beyond its strong association with later risk-taking and generally unhealthy lifestyles, it is critically important to underscore the extent to which toxic stress in early childhood has also been shown to cause physiologic disruptions that persist into adulthood and lead to frank disease, even in the absence of later health-threatening behaviors. For example, the biological manifestations of toxic stress can include alterations in immune function⁶⁸ and measurable increases in inflammatory markers,^{69–72} which are known to be associated with poor health outcomes as diverse as cardiovascular disease,^{69,70,73} viral hepatitis,⁷⁴ liver cancer,⁷⁵ asthma,⁷⁶ chronic obstructive pulmonary disease,⁷⁷ autoimmune diseases,⁷⁸ poor dental health,⁷² and depression.^{79–81} Thus, toxic stress in early childhood not only is a risk factor for later risky behavior but also can be a direct source of biological injury or disruption that may have lifelong consequences independent of whatever circumstances might follow later in life. In such cases, toxic stress can be viewed as the precipitant of a physiologic memory or biological signature that confers lifelong risk well beyond its time of origin.^{38,42–44}

Over and above its toll on individuals, it is also important to address the enormous social and economic costs

of toxic stress and its consequences for all of society. The multiple dimensions of these costs extend from differential levels of civic participation and their impacts on the quality of community life to the health and skills of the nation's workforce and its ability to participate successfully in a global economy. In the realm of learning and behavior, economists argue for early and sustained investments in early care and education programs, particularly for children whose parents have limited education and low income, on the basis of persuasive evidence from cost-benefit analyses that reveal the costs of incarceration and diminished economic productivity associated with educational failure.^{82–86} In view of the relatively scarce attention to health outcomes in these long-term follow-up studies, the full return on investments that reduce toxic stress in early childhood is likely to be much higher. Health care expenditures that are paying for the consequences of unhealthy lifestyles (eg, obesity, tobacco, alcohol, and substance abuse) are enormous, and the costs of chronic diseases that may have their origins early in life include many conditions that consume a substantial percentage of current state and federal budgets. The potential savings in health care costs from even small, marginal reductions in the prevalence of cardiovascular disease, hypertension, diabetes, and depression are, therefore, likely to dwarf the considerable economic productivity and criminal justice benefits that have been well documented for effective early childhood interventions.

In summary, the EBD approach to childhood adversity discussed in this report has 2 compelling implications for a full, life span perspective on health promotion and disease prevention. First, it postulates that toxic

stress in early childhood plays an important causal role in the intergenerational transmission of disparities in educational achievement and health outcomes. Second, it underscores the need for the entire medical community to focus more attention on the roots of adult diseases that originate during the prenatal and early childhood periods and to rethink the concept of preventive health care within a system that currently perpetuates a scientifically untenable wall between pediatrics and internal medicine.

THE NEED FOR A NEW PEDIATRIC PARADIGM TO PROMOTE HEALTH AND PREVENT DISEASE

In his 1966 Aldrich Award address, Dr Julius Richmond identified child development as the basic science of pediatrics.⁸⁷ It is now time to expand the boundaries of that science by incorporating more than 4 decades of transformational research in neuroscience, molecular biology, and genomics, along with parallel advances in the behavioral and social sciences (see Fig 1). This newly augmented, interdisciplinary, basic science of pediatrics offers a promising framework for a deeper understanding of the biology and ecology of the developmental process. More importantly, it presents a compelling opportunity to leverage these rapidly advancing frontiers of knowledge to formulate more effective strategies to enhance lifelong outcomes in learning, behavior, and health.

The time has come for a coordinated effort among basic scientists, pediatric subspecialists, and primary care clinicians to develop more effective strategies for addressing the origins of social class, racial, and ethnic disparities in health and development. To this end, a unified, science-based approach to early childhood policy and practice across multiple sectors (including primary health care, early

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care and education, and child welfare, among many others) could provide a compelling framework for a new era in community-based investment in which coordinated efforts are driven by a shared knowledge base rather than distracted by a diversity of traditions, approaches, and funding streams. Recognizing both the critical value and clear limitations of what can be accomplished within the constraints of an office visit, 21st century pediatrics is well positioned to serve as the primary engine for a broader approach to health promotion and disease prevention that is guided by cutting-edge science and expanded in scope beyond individualized health care.^{88,89} The pediatric medical home of the future could offer more than the early identification of concerns and timely referral to available programs, as enhanced collaboration between pediatricians and community-based agencies could be viewed as a vehicle for testing promising new intervention strategies rather than simply

improving coordination among existing services. With this goal in mind, science tells us that interventions that strengthen the capacities of families and communities to protect young children from the disruptive effects of toxic stress are likely to promote healthier brain development and enhanced physical and mental well-being. The EBD approach proposed in this article is adapted from a science-based framework created by the Center on the Developing Child at Harvard University to advance early childhood policies and programs that support this vision (see Fig 2).¹ Its rationale, essential elements, and implications for pediatric practice are summarized below.

Broadening the Framework for Early Childhood Policy and Practice

Advances across the biological, behavioral, and social sciences support 2 clear and powerful messages for leaders who are searching for more

effective ways to improve the health of the nation.⁶ First, current health promotion and disease prevention policies focused largely on adults would be more effective if evidence-based investments were also made to strengthen the foundations of health in the prenatal and early childhood periods. Second, significant reductions in chronic disease could be achieved across the life course by decreasing the number and severity of adverse experiences that threaten the well-being of young children and by strengthening the protective relationships that help mitigate the harmful effects of toxic stress. The multiple domains that affect the biology of health and development—including the foundations of healthy development, caregiver and community capacities, and public and private sector policies and programs—provide a rich array of targeted opportunities for the introduction of innovative interventions, beginning in the earliest years of life.¹

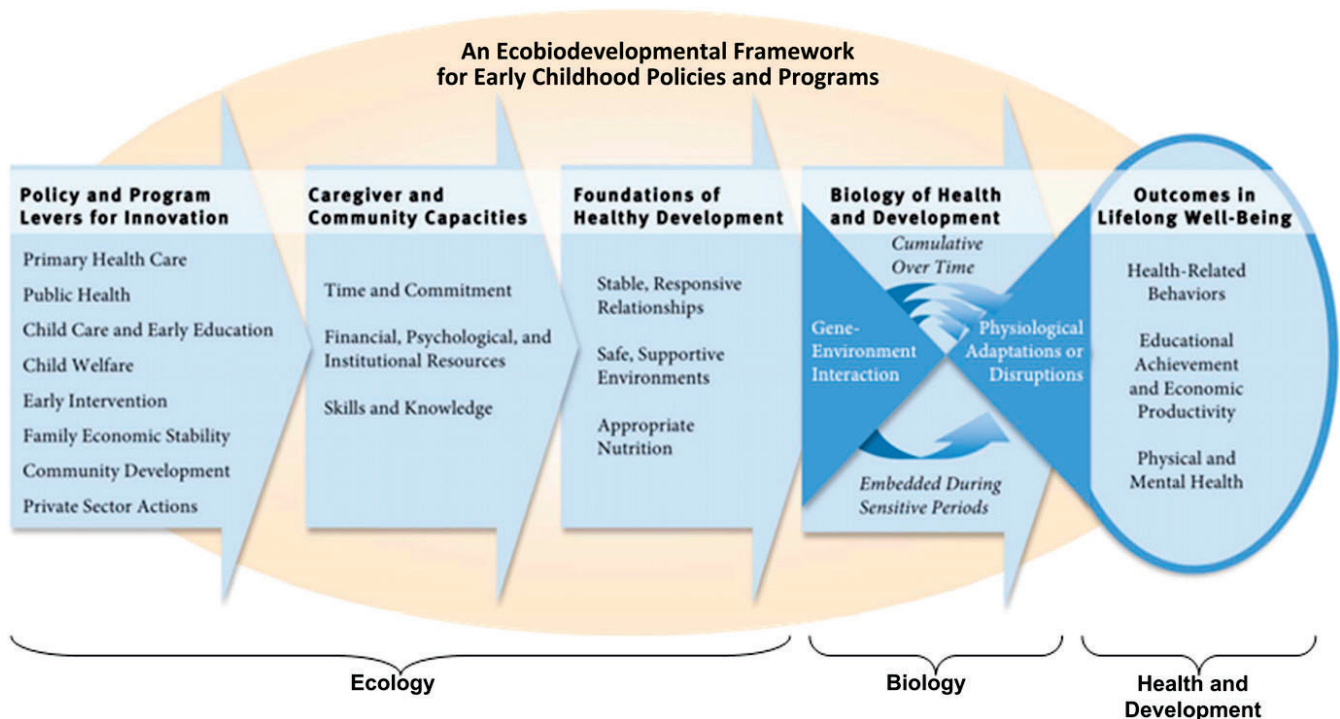


FIGURE 2

An ecobiodevelopmental framework for early childhood policies and programs. This was adapted from ref 1. See text for details.

The biology of health and development explains how experiences and environmental influences get under the skin and interact with genetic predispositions, which then result in various combinations of physiologic adaptation and disruption that affect lifelong outcomes in learning, behavior, and both physical and mental well-being. These findings call for us to augment adult-focused approaches to health promotion and disease prevention by addressing the early childhood origins of lifelong illness and disability.

The foundations of healthy development refers to 3 domains that establish a context within which the early roots of physical and mental well-being are nourished. These include (1) a stable and responsive environment of relationships, which provides young children with consistent, nurturing, and protective interactions with adults to enhance their learning and help them develop adaptive capacities that promote well-regulated stress-response systems; (2) safe and supportive physical, chemical, and built environments, which provide physical and emotional spaces that are free from toxins and fear, allow active exploration without significant risk of harm, and offer support for families raising young children; and (3) sound and appropriate nutrition, which includes health-promoting food intake and eating habits, beginning with the future mother's preconception nutritional status.

Caregiver and community capacities to promote health and prevent disease and disability refers to the ability of family members, early childhood program staff, and the social capital provided through neighborhoods, voluntary associations, and the parents' workplaces to play a major supportive role in strengthening the foundations of child health. These capacities can be grouped into 3 categories: (1) time

and commitment; (2) financial, psychological, social, and institutional resources; and (3) skills and knowledge.

Public and private sector policies and programs can strengthen the foundations of health through their ability to enhance the capacities of caregivers and communities in the multiple settings in which children grow up. Relevant policies include both legislative and administrative actions that affect systems responsible for primary health care, public health, child care and early education, child welfare, early intervention, family economic stability (including employment support for parents and cash assistance), community development (including zoning regulations that influence the availability of open spaces and sources of nutritious food), housing, and environmental protection, among others. It is also important to underscore the role that the private sector can play in strengthening the capacities of families to raise healthy and competent children, particularly through supportive workplace policies (such as paid parental leave, support for breastfeeding, and flexible work hours to attend school activities and medical visits).

Defining a Distinctive Niche for Pediatrics Among Multiple Early Childhood Disciplines and Services

Notwithstanding the important goal of ensuring a medical home for all children, extensive evidence on the social determinants of health indicates that the reduction of disparities in physical and mental well-being will depend on more than access to high-quality medical care alone. Moreover, as noted previously, experience tells us that continuing calls for enhanced coordination of effort across service systems are unlikely to be sufficient if the systems are guided by different

values and bodies of knowledge and the effects of their services are modest. With these caveats in mind, pediatricians are strategically situated to mobilize the science of early childhood development and its underlying neurobiology to stimulate fresh thinking about both the scope of primary health care and its relation to other programs serving young children and their families. Indeed, every system that touches the lives of children—as well as mothers before and during pregnancy—offers an opportunity to leverage this rapidly growing knowledge base to strengthen the foundations and capacities that make lifelong healthy development possible. Toward this end, explicit investments in the early reduction of significant adversity are particularly likely to generate positive returns.

The possibilities and limitations of well-child care within a multidimensional health system have been the focus of a spirited and enduring discussion within the pediatric community.^{88,90,91} Over more than half a century, this dialogue has focused on the need for family-centered, community-based, culturally competent care for children with developmental disabilities, behavior problems, and chronic health impairments, as well as the need for a broader contextual approach to the challenges of providing more effective interventions for children living under conditions of poverty, with or without the additional complications of parental mental illness, substance abuse, and exposure to violence.¹⁰ As the debate has continued, the gap between the call for comprehensive services and the realities of day-to-day practice has remained exceedingly difficult to reduce. Basic recommendations for routine developmental screening and referrals to appropriate community-based services have been particularly difficult

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to implement.⁹² The obstacles to progress in this area have been formidable at both ends of the process—beginning with the logistical and financial challenges of conducting routine developmental screening in a busy office setting and extending to significant limitations in access to evidence-based services for children and families who are identified as having problems that require intervention.

Despite long-standing calls for an explicit, community-focused approach to primary care, a recent national study of pediatric practices identified persistent difficulties in achieving effective linkages with community-based resources as a major challenge.⁹² A parallel survey of parents also noted the limited communication that exists between pediatric practices and community-based services, such as Supplemental Nutrition Program for Women, Infants, and Children; child care providers; and schools.⁹³ Perhaps most important, both groups agreed that pediatricians cannot be expected to meet all of a child's needs. This challenge is further complicated by the marked variability in quality among community-based services that are available—ranging from evidence-based interventions that clearly improve child outcomes to programs that appear to have only marginal effects or no measurable impacts. Thus, although chronic difficulty in securing access to indicated services is an important problem facing most practicing pediatricians, the limited evidence of effectiveness for many of the options that are available (particularly in rural areas and many states in which public investment in such services is more limited) presents a serious problem that must be acknowledged and afforded greater attention.

At this point in time, the design and successful implementation of more effective models of health promotion

and disease prevention for children experiencing significant adversity will require more than advocacy for increased funding. It will require a deep investment in the development, testing, continuous improvement, and broad replication of innovative models of cross-disciplinary policy and programmatic interventions that are guided by scientific knowledge and led by practitioners in the medical, educational, and social services worlds who are truly ready to work together (and to train the next generation of practitioners) in new ways.^{88,89} The sheer number and complexity of under-addressed threats to child health that are associated with toxic stress demands bold, creative leadership and the selection of strategic priorities for focused attention. To this end, science suggests that 2 areas are particularly ripe for fresh thinking: the child welfare system and the treatment of maternal depression.

For more than a century, child welfare services have focused on physical safety, reduction of repeated injury, and child custody. Within this context, the role of the pediatrician is focused largely on the identification of suspected maltreatment and the documentation and treatment of physical injuries. Advances in our understanding of the impact of toxic stress on lifelong health now underscore the need for a broader pediatric approach to meet the needs of children who have been abused or neglected. In some cases, this could be provided within a medical home by skilled clinicians with expertise in early childhood mental health. In reality, however, the magnitude of needs in this area generally exceeds the capacity of most primary care practice settings. A report from the Institute of Medicine and National Research Council¹⁵ stated that these needs could be addressed through regularized referrals from

the child welfare system to the early intervention system for children with developmental delays or disabilities; subsequent federal reauthorizations of the Keeping Children and Families Safe Act and the Individuals with Disabilities Education Act (Part C) both included requirements for establishing such linkages. The implementation of these federal requirements, however, has moved slowly.

The growing availability of evidence-based interventions that have been shown to improve outcomes for children in the child welfare system⁹⁴ underscores the compelling need to transform “child protection” from its traditional concern with physical safety and custody to a broader focus on the emotional, social, and cognitive costs of maltreatment. The Centers for Disease Control and Prevention has taken an important step forward by promoting the prevention of child maltreatment as a public health concern.^{95,96} The pediatric community could play a powerful role in leading the call for implementation of the new requirement for linking child welfare to early intervention programs, as well as bringing a strong, science-based perspective to the collaborative development and implementation of more effective intervention models.

The widespread absence of attention to the mother-child relationship in the treatment of depression in women with young children is another striking example of the gap between science and practice that could be reduced by targeted pediatric advocacy.⁹⁷ Extensive research has demonstrated the extent to which maternal depression compromises the contingent reciprocity between a mother and her young child that is essential for healthy cognitive, linguistic, social, and emotional development.⁹⁸ Despite that well-documented observation, the treatment of depression in women with

young children is typically viewed as an adult mental health service and rarely includes an explicit focus on the mother-child relationship. This serious omission illustrates a lack of understanding of the consequences for the developing brain of a young child when the required “serve and return” reciprocity of the mother-child relationship is disrupted or inconsistent. Consequently, and not surprisingly, abundant clinical research indicates that the successful treatment of a mother’s depression does not generally translate into comparable recovery in her young child unless there is an explicit therapeutic focus on their dyadic relationship.⁹⁸ Pediatricians are the natural authorities to shed light on this current deficiency in mental health service delivery. Advocating for payment mechanisms that require (or provide incentives for) the coordination of child and parent medical services (eg, through automatic coverage for the parent-child dyad linked to reimbursement for the treatment of maternal depression) offers 1 promising strategy that American Academy of Pediatrics state chapters could pursue. As noted previously, although some medical homes may have the expertise to provide this kind of integrative treatment, most pediatricians rely on the availability of other professionals with specialized skills who are often difficult to find. Whether such services are provided within or connected to the medical home, it is clear that standard pediatric practice must move beyond screening for maternal depression and invest greater energy in securing the provision of appropriate and effective treatment that meets the needs of both mothers and their young children.

The targeted messages conveyed in these 2 examples are illustrative of the kinds of specific actions that offer

promising new directions for the pediatric community beyond general calls for comprehensive, family-centered, community-based services. Although the practical constraints of office-based practice make it unlikely that many primary care clinicians will ever play a lead role in the treatment of children affected by maltreatment or maternal depression, pediatricians are still the best positioned among all the professionals who care for young children to provide the public voice and scientific leadership needed to catalyze the development and implementation of more effective strategies to reduce adversities that can lead to lifelong disparities in learning, behavior, and health.

A great deal has been said about how the universality of pediatric primary care makes it an ideal platform for coordinating the services needed by vulnerable, young children and their families. In this respect, the medical home is strategically positioned to play 2 important roles. The first is to ensure that needs are identified, state-of-the-art management is provided as indicated, and credible evaluation is conducted to assess the effects of the services that are being delivered. The second and, ultimately, more transformational role is to mobilize the entire pediatric community (including both clinical specialists and basic scientists) to drive the design and testing of much-needed, new, science-based interventions to reduce the sources and consequences of significant adversity in the lives of young children.⁹⁹ To this end, a powerful new role awaits a new breed of pediatricians who are prepared to build on the best of existing community-based services and to work closely with creative leaders from a range of disciplines and sectors to inform innovative approaches to health promotion and disease prevention that generate greater effects than existing efforts.

No other profession brings a comparable level of scientific expertise, professional stature, and public trust—and nothing short of transformational thinking beyond the hospital and office settings is likely to create the magnitude of breakthroughs in health promotion that are needed to match the dramatic advances that are currently emerging in the treatment of disease. This new direction must be part of the new frontier in pediatrics—a frontier that brings cutting-edge scientific thinking to the multidimensional world of early childhood policy and practice for children who face significant adversity. Moving that frontier forward will benefit considerably from pediatric leadership that provides an intellectual and operational bridge connecting the basic sciences of neurobiology, molecular genetics, and developmental psychology to the broad and diverse landscape of health, education, and human services.

SUMMARY

A vital and productive society with a prosperous and sustainable future is built on a foundation of healthy child development. Health in the earliest years—beginning with the future mother’s well-being before she becomes pregnant—lays the groundwork for a lifetime of the physical and mental vitality that is necessary for a strong workforce and responsible participation in community life. When developing biological systems are strengthened by positive early experiences, children are more likely to thrive and grow up to be healthy, contributing adults. Sound health in early childhood provides a foundation for the construction of sturdy brain architecture and the achievement of a broad range of skills and learning capacities. Together these constitute the building blocks for a vital and sustainable society that invests in its

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human capital and values the lives of its children.

Advances in neuroscience, molecular biology, and genomics have converged on 3 compelling conclusions: (1) early experiences are built into our bodies; (2) significant adversity can produce physiologic disruptions or biological memories that undermine the development of the body's stress response systems and affect the developing brain, cardiovascular system, immune system, and metabolic regulatory controls; and (3) these physiologic disruptions can persist far into adulthood and lead to lifelong impairments in both physical and mental health. This technical report presents a framework for integrating recent advances in our understanding of human development with a rich and growing body of evidence regarding the disruptive effects of childhood adversity and toxic stress. The EBD framework that guides this report suggests that many adult diseases are, in fact, developmental disorders that begin early in life. This framework indicates that the future of pediatrics lies in its unique leadership position as a credible and respected voice on behalf of children, which provides a powerful platform for translating scientific advances into more effective strategies and creative interventions to reduce the early childhood adversities that lead to lifelong impairments in learning, behavior, and health.

CONCLUSIONS

1. Advances in a broad range of interdisciplinary fields, including developmental neuroscience, molecular biology, genomics, epigenetics, developmental psychology, epidemiology, and economics, are converging on an integrated, basic science of pediatrics (see Fig 1).
2. Rooted in a deepening understanding of how brain architecture is

shaped by the interactive effects of both genetic predisposition and environmental influence, and how its developing circuitry affects a lifetime of learning, behavior, and health, advances in the biological sciences underscore the foundational importance of the early years and support an EBD framework for understanding the evolution of human health and disease across the life span.

3. The biology of early childhood adversity reveals the important role of toxic stress in disrupting developing brain architecture and adversely affecting the concurrent development of other organ systems and regulatory functions.
4. Toxic stress can lead to potentially permanent changes in learning (linguistic, cognitive, and social-emotional skills), behavior (adaptive versus maladaptive responses to future adversity), and physiology (a hyperresponsive or chronically activated stress response) and can cause physiologic disruptions that result in higher levels of stress-related chronic diseases and increase the prevalence of unhealthy lifestyles that lead to widening health disparities.
5. The lifelong costs of childhood toxic stress are enormous, as manifested in adverse impacts on learning, behavior, and health, and effective early childhood interventions provide critical opportunities to prevent these undesirable outcomes and generate large economic returns for all of society.
6. The consequences of significant adversity early in life prompt an urgent call for innovative strategies to reduce toxic stress within the context of a coordinated system of policies and services guided by an integrated science of early childhood and early brain development.

7. An EBD framework, grounded in an integrated basic science, provides a clear theory of change to help leaders in policy and practice craft new solutions to the challenges of societal disparities in health, learning, and behavior (see Fig 2).
8. Pediatrics provides a powerful yet underused platform for translating scientific advances into innovative early childhood policies, and practicing pediatricians are ideally positioned to participate "on the ground" in the design, testing, and refinement of new models of disease prevention, health promotion, and developmental enhancement beginning in the earliest years of life.

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Disparities in Childhood Abuse Between Transgender and Cisgender Adolescents

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abstract

BACKGROUND AND OBJECTIVES: Transgender adolescents (TGAs) exhibit disproportionate levels of mental health problems compared with cisgender adolescents (CGAs), but psychosocial processes underlying mental health disparities among TGAs remain understudied. We examined self-reported childhood abuse among TGAs compared with CGAs and risk for abuse within subgroups of TGAs in a nationwide sample of US adolescents.

METHODS: Adolescents aged 14 to 18 completed a cross-sectional online survey ($n = 1836$, including 1055 TGAs, 340 heterosexual CGAs, and 433 sexual minority CGAs). Participants reported gender assigned at birth and current gender identity (categorized as the following: cisgender males, cisgender females, transgender males, transgender females, nonbinary adolescents assigned female at birth, nonbinary adolescents assigned male at birth, and questioning gender identity). Lifetime reports of psychological, physical, and sexual abuse were measured.

RESULTS: Seventy-three percent of TGAs reported psychological abuse, 39% reported physical abuse, and 19% reported sexual abuse. Compared with heterosexual CGAs, TGAs had higher odds of psychological abuse (odds ratio [OR] = 1.84), physical abuse (OR = 1.61), and sexual abuse (OR = 2.04). Within separate subgroup analyses, transgender males and nonbinary adolescents assigned female at birth had higher odds of reporting psychological abuse than CGAs.

CONCLUSIONS: In a nationwide online sample of US adolescents, TGAs had elevated rates of psychological, physical, and sexual abuse compared with heterosexual CGAs. Risk for psychological abuse was highest among TGAs assigned female at birth. In the future, researchers should examine how more frequent experiences of abuse during childhood could contribute to disproportionate mental health problems observed within this population.



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WHAT'S KNOWN ON THIS SUBJECT: Limited evidence indicates transgender adolescents (TGAs) are at risk for abuse during childhood. However, in no nationwide study have researchers examined disparities in abuse between TGAs and cisgender adolescents, and risk within subgroups of TGAs is unknown.

WHAT THIS STUDY ADDS: In a nationwide sample of US adolescents, TGAs had higher odds of reporting psychological, physical, and sexual abuse than heterosexual cisgender adolescents. TGAs assigned female at birth had the highest odds of psychological abuse.

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Empirical attention to the experiences of transgender adolescents (TGAs) (adolescents whose gender identity is different from their sex assigned at birth) has increased in the past decade, and mounting evidence indicates TGAs disproportionately experience mental health problems when compared with cisgender adolescents (CGAs) (adolescents whose gender identity is the same as their sex assigned at birth).¹⁻⁵ TGAs report high rates of suicidality, depressive symptoms, and anxiety.^{3,4,6,7} In particular, TGAs experience very high rates of suicidality, and as many as one-half of TGAs report making a suicide attempt in their lifetime.³ Despite emerging evidence of stark mental health disparities between TGAs and CGAs, little work has examined psychosocial factors that could underlie mental health problems among TGAs.

Experiences of abuse during childhood contribute to the onset of mental health problems during adolescence and adulthood, including suicidality and depression.⁸⁻¹¹ Individuals who experience abuse during childhood are 3 to 5 times more likely to develop suicidality later in development.¹² Experiencing sexual or physical abuse during childhood is related to chronic and repeated suicidal behavior into adulthood.^{13,14} Initial reports have revealed higher risk for suicidal behavior among TGAs who report childhood abuse.¹⁵ Given the extremely high rates of suicidal ideation and behavior observed within samples of TGAs, greater attention to this population's psychosocial experiences, which could underlie their disproportionate rates of mental health problems, is needed.

Furthermore, TGAs could be at elevated risk for enduring abuse

during childhood because of this population's distinct experiences with gender identity and gender expression across development. TGAs are less conforming to societal expectations of gender expression during childhood, even before their identification with a gender identity that differs from their sex assigned at birth.^{16,17} Children who are gender nonconforming are more likely to experience abuse when compared with gender-conforming peers.¹⁸⁻²⁰ Thus, TGAs could be more likely to experience abuse during childhood, and it is particularly important to document this population's level of risk for abuse compared with their peers given their elevated rates of mental health problems during adolescence.

However, little research has examined rates of childhood abuse among TGAs compared with CGAs, and relative risk of abuse among subgroups of TGAs (eg, transgender males, transgender females, nonbinary adolescents) compared with CGAs has never been examined. Most research examining childhood abuse among transgender individuals has been conducted with adults, and few studies have investigated abuse among TGAs 18 and younger.²¹ One study found TGAs reported higher levels of abuse than sexual minority CGAs (CGAs who identify as lesbian, gay, or bisexual),²² a population with elevated risk for experiencing childhood abuse.²³ Similar findings were reported in a sample of lesbian, gay, bisexual, and transgender youth and young adults.²⁴ In only one previous study has childhood abuse among TGAs been compared with a subsample of CGAs that was not limited to sexual minority CGAs.²⁵ Using a statewide survey of adolescents, the Minnesota Student Survey, Baams²⁵ reported TGAs were more likely than non-TGAs to report psychological or

physical abuse, as well as polyvictimization. However, the Minnesota Student Survey only allowed adolescents to answer "yes" or "no" to the following question: "Do you consider yourself transgender, genderqueer, genderfluid, or unsure about your gender identity?" This approach to measurement ignores heterogeneity among TGAs and implicitly assumes the psychosocial experiences and mental health sequelae of TGAs do not differ across subgroups. Recent evidence indicates TGAs with binary identities (eg, transgender males and transgender females) have elevated rates of suicidal ideation and behavior compared with CGAs, but these same elevations are not uniformly observed among nonbinary TGAs (TGAs who identify as nonbinary, genderqueer, agender, etc).³ In addition, sex assigned at birth likely contributes to differences in psychosocial experiences among TGAs because TGAs assigned female at birth have reported higher levels of peer victimization than TGAs assigned male.⁷ Furthermore, sex assigned at birth predicts experiences of childhood abuse in the general population.^{9,26,27} However, no previous research has documented relative risk of childhood abuse among TGA subgroups subdivided by sex assigned at birth or binary versus nonbinary identities compared with CGAs.

In the current study, we investigate disparities in childhood abuse between TGAs and CGAs within a large nationwide sample of adolescents in the United States. Because sexual minority CGAs are known to have an elevated risk of childhood abuse compared with heterosexual CGAs, we compare TGAs and sexual minority CGAs separately with heterosexual CGAs. Additionally, we used the recommended two-item approach to measure gender identity

by assessing both the sex assigned at birth and current gender identity with a number of different identity response options.^{21,28} This approach allowed us to examine potential subgroup differences in childhood abuse in a separate set of analyses between TGAs and CGAs, a critical advancement beyond existing studies.

METHODS

Procedure

The Gender Minority Youth (GMY) Study was a cross-sectional online survey of TGAs and CGAs in the United States conducted from July to October 2018.²⁹ Participants were recruited via advertisements on Facebook and Instagram, social media platforms used by the vast majority of adolescents.³⁰ Two sets of advertisements targeted users ages 14 to 18. One had additional targets to reach TGAs using interest labels such as “transgender,” “gender-specific and gender-neutral pronouns,” “genderqueer,” and “passing (gender).” Almost all TGAs entered the survey through the TGA-specific advertisement, and CGAs who entered through the TGA-specific advertisement were more likely to identify with minority sexual orientations. Thus, the methods of the GMY Study oversampled TGAs and sexual minority CGAs, two difficult-to-reach populations that are underrepresented in adolescent health research.³¹

All participants provided assent (with a waiver of parental permission) before completing the GMY Study. Participants could enter a drawing for a \$50 gift card and were provided with resources related to mental health, child abuse, and sexual assault. The University of Pittsburgh’s Human Research Protection Office approved this study.

Advertisements were served 377 469 times, and 8747 clicks were recorded (2.48% click-through rate). A total of 5642 participants assented, entered the survey, and began responding to questions. Adolescents were screened out of the survey if they were outside the targeted age range; in light of underrepresentation of TGAs assigned male at birth in the early period of data collection, additional screening was used toward the end of recruitment to allow only TGAs assigned male at birth to participate. In total, 1997 participants were screened out of the survey.

Multiple steps were taken to ensure the quality of the collected data. First, Internet Protocol (IP) addresses were used to identify potential duplicate cases, and cases with the same IP address were hand-checked. Duplicates with the same demographic characteristics and height and weight were removed ($n = 320$). Second, outlier analysis indicated that no cases had evidence of values outside the expected range on variables reported as counts. Third, free-response text was reviewed, and 7 cases that had inappropriate responses to survey questions were removed. Additional details of the GMY Study and data set are available elsewhere.²⁹

The current analysis included 1836 participants who completed the survey through the childhood abuse questions. Compared with the full sample of 3318, these 1836 participants were older, more likely to report female sex assigned at birth, and more likely to identify as bisexual or pansexual.

Measures

Gender Identity

Participants reported their sex assigned at birth as either male or female. Participants selected all

gender identities they currently identify with from the following options: male, female, transgender, female-to-male transgender/FTM, male-to-female transgender/MTF, trans male/transmasculine, trans female/transfeminine, genderqueer, gender expansive, intersex, androgynous, nonbinary, two-spirited, third gender, agender, not sure, and other. A 7-category gender identity variable was created, including cisgender male, cisgender female, transgender male (including participants who reported female sex assigned at birth and male, female-to-male transgender/FTM, and/or trans male/transmasculine identities), transgender female (including participants who reported male sex assigned at birth and female, male-to-female transgender/MTF, and/or trans female/transfeminine identities), nonbinary assigned female at birth, nonbinary assigned male at birth, and questioning gender identity (including participants who selected “not sure” and no other gender identities). Adolescents were categorized as nonbinary if they reported a genderqueer, gender expansive, intersex, androgynous, nonbinary, two-spirited, third gender, or agender current gender identity and no binary gender identities. In other words, adolescents were not categorized as nonbinary if they selected any of the binary identities. We have found empirical support for this approach to categorization in previous analyses of this data set.³ Questioning adolescents could not be divided by sex assigned at birth because of small cell sizes.

Childhood Abuse

Abuse items were adapted from the Adverse Childhood Experiences questionnaire.³² Psychological abuse (being sworn

Participants

Descriptive demographic information for the full sample, for heterosexual CGAs, for sexual minority CGAs, for TGAs, and for each gender identity subgroup is presented in Table 1. According to zip codes, participants lived in all 50 states, as well as Washington, DC, and Puerto Rico. CGAs in the sample were similar to nationally representative data regarding race. Compared with CGAs, TGAs were more likely to report white race, minority sexual orientations, older age, and lower SSS.

Analysis

First, descriptive data for each child abuse outcome were examined for heterosexual CGAs, sexual minority CGAs, TGAs, and each gender identity subgroup. Second, χ^2 tests, including pairwise comparisons between heterosexual CGAs, sexual minority CGAs, and TGAs as well as between each of the 7 gender identity subgroups on each childhood abuse outcome were estimated. Bonferroni corrections were applied to significance levels to account for multiple comparisons ($n = 3$ in 3-category comparisons [$P < .017$]; $n = 21$ in 7-category comparisons [$P < .002$]). Third, multivariable logistic regression models were estimated to examine odds of each abuse outcome for TGAs (aggregated into 1 group) and sexual minority CGAs compared with heterosexual CGAs, while adjusting for sex assigned at birth, age, SSS, and race. Finally, multivariable logistic regression models were estimated for each dichotomized abuse outcome predicted by gender identity (coded as 7 subgroups) while controlling for sexual orientation, age, SSS, and race.

RESULTS

Percentages, along with 95% confidence intervals (CIs), of heterosexual CGAs, sexual minority CGAs, TGAs, and participants in gender identity subgroups endorsing dichotomized abuse outcomes are presented in Figs 1–3. Means and SEs were multiplied by 100 to transform to percentage metric before calculating CIs. Within subgroup comparisons, each χ^2 omnibus test was significant (all P values $< .001$), indicating each abuse outcome varied significantly across the 3 broad sexual orientation and gender identity categories and the 7 specific gender identity categories.

Psychological Abuse

In unadjusted comparisons, TGAs (aggregated into one group) reported higher rates of psychological abuse than heterosexual CGAs, and sexual minority CGAs did not differ from heterosexual CGAs. In the adjusted model, TGAs had higher odds of

psychological abuse than heterosexual CGAs (odds ratio [OR] = 1.84), but heterosexual and sexual minority CGAs did not differ (see Table 2). Pairwise 7-category gender identity comparisons indicated that transgender males and nonbinary adolescents assigned female at birth reported higher levels of psychological abuse than both cisgender males and females. Within adjusted analyses examining subgroup differences, cisgender males had lower odds of reporting psychological abuse compared with cisgender females. In the same model, transgender males and nonbinary adolescents assigned female at birth had higher odds of reporting psychological abuse than either cisgender group (see Table 3).

Physical Abuse

In unadjusted comparisons, TGAs reported higher rates of physical abuse than heterosexual CGAs, and

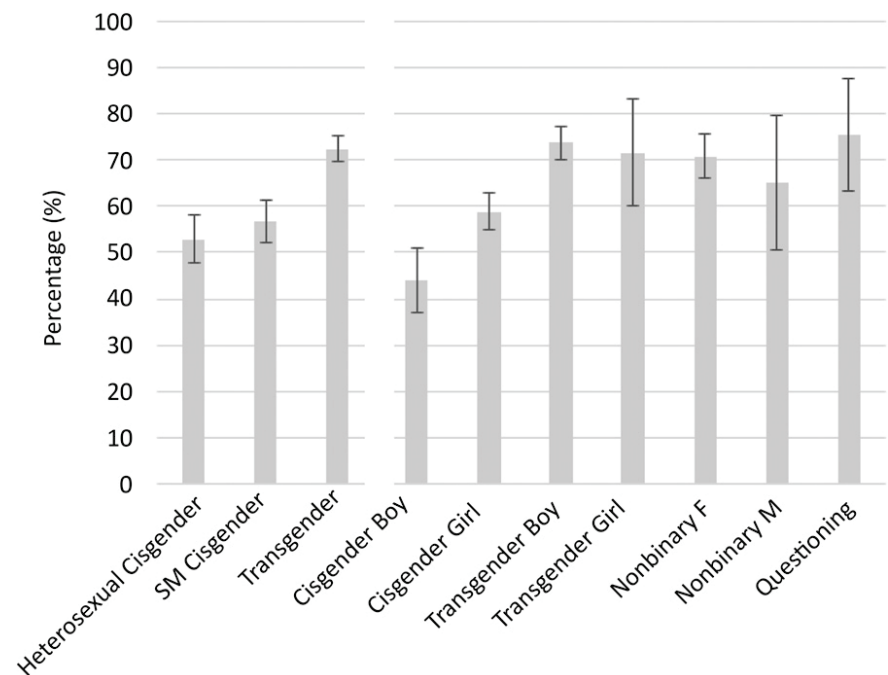


FIGURE 1

Percentage of participants endorsing psychological abuse among heterosexual CGAs, SM CGAs, TGAs, and each gender identity subgroup, including 95% CIs. Nonbinary F, nonbinary adolescents assigned female at birth; Nonbinary M, nonbinary adolescents assigned male at birth; SM, sexual minority.

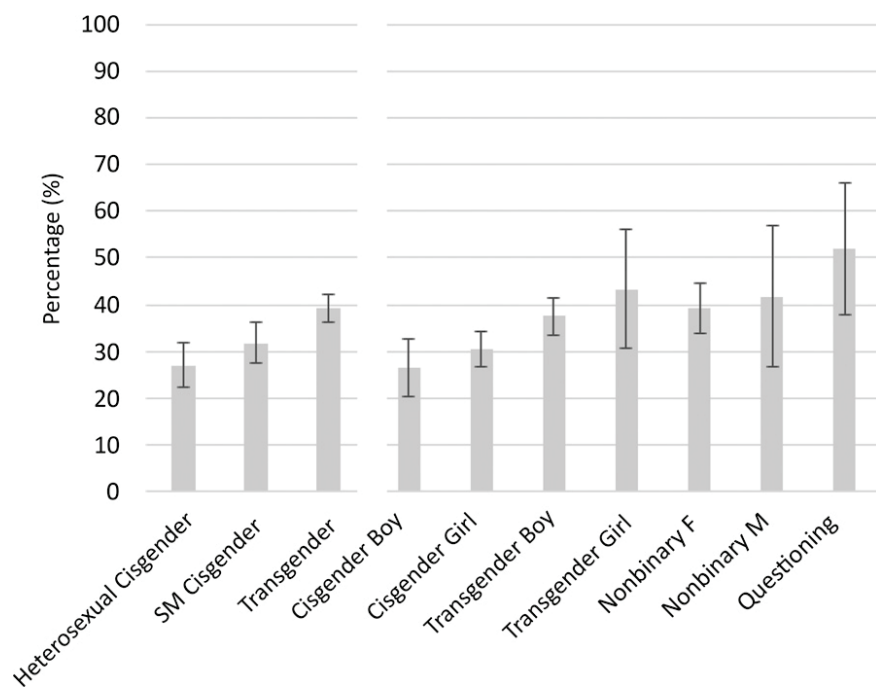


FIGURE 2

Percentage of participants endorsing physical abuse among heterosexual CGAs, SM CGAs, TGAs, and each gender identity subgroup, including 95% CIs. Nonbinary F, nonbinary adolescents assigned female at birth; Nonbinary M, nonbinary adolescents assigned male at birth; SM, sexual minority.

sexual minority CGAs did not differ from heterosexual CGAs. Similar results were observed in the adjusted model after controlling for covariates because TGAs had higher odds of reporting physical abuse than heterosexual CGAs (OR = 1.61). Adolescents questioning their gender identity reported higher levels of physical abuse than CGAs in unadjusted pairwise comparisons by subgroup, and questioning adolescents had higher odds of physical abuse in an adjusted model compared with cisgender female adolescents.

Sexual Abuse

In unadjusted comparisons, both TGAs and sexual minority CGAs had higher odds of reporting sexual abuse compared with heterosexual CGAs, and these results persisted within adjusted logistic regression analysis (OR = 2.04 for TGAs and OR = 1.87 for sexual minority CGAs). Nonbinary adolescents

assigned female at birth reported higher levels of sexual abuse than CGAs in unadjusted pairwise comparisons. After adjusting for covariates, cisgender males had lower odds of reporting sexual abuse compared with cisgender females, and no TGA subgroups had significantly different odds of reporting sexual abuse compared with cisgender females.

DISCUSSION

TGAs are more likely to report psychological, physical, and sexual abuse during childhood compared with heterosexual CGAs. Our findings align with those of previous studies finding high rates of childhood abuse among transgender individuals.^{22,24,25} Growing evidence indicates TGAs experience mental health problems at higher rates than CGAs, and childhood abuse likely contributes to the onset of mental health problems among TGAs. In the future, researchers should examine

the role of childhood abuse in the etiology of mental health problems among TGAs.

In addition, our data set enabled us to examine subgroup differences in childhood abuse between TGAs and CGAs. In particular, TGAs assigned female at birth were more likely to report psychological abuse by parents or other adults in the household. Researchers have hypothesized that individuals who have experienced physical and/or sexual abuse will also endorse psychological abuse items because of overlap between these constructs, although they may not have experienced discrete psychological abuse.³⁵ Given this possibility, we conducted post hoc analyses examining multivariate associations between our 7-category gender identity variable and psychological abuse while removing all participants who endorsed physical or sexual abuse. In these analyses, transgender males retained higher odds of psychological abuse compared with female CGAs (OR = 1.80; 95% CI: 1.27–2.56), but nonbinary adolescents assigned female at birth no longer had higher odds of psychological abuse (OR = 1.35; 95% CI: 0.89–2.04). These findings indicate transgender males have higher risk for psychological abuse, which is separate from their risk for physical or sexual abuse, but nonbinary adolescents assigned female at birth no longer have higher risk for psychological abuse when accounting for the potential cumulative effect of other forms of abuse on this outcome. Among CGAs, nationally representative data indicate individuals assigned female at birth are more likely to report childhood psychological maltreatment,³⁶ and the same could be true of TGAs assigned female at birth. In the future, researchers should examine how parent-adolescent relationships are

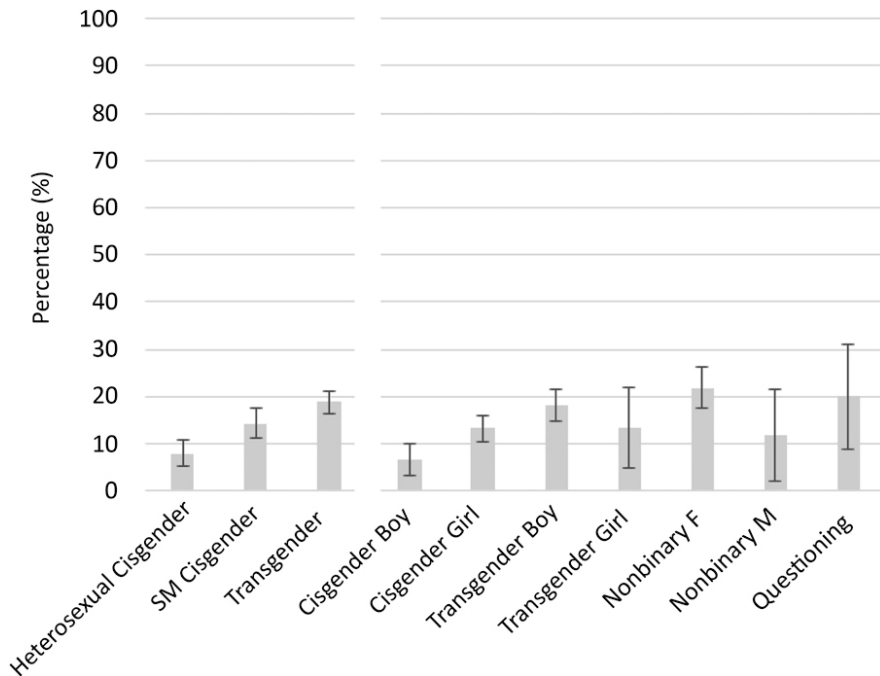


FIGURE 3

Percentage of participants endorsing sexual abuse among heterosexual CGAs, SM CGAs, TGAs, and each gender identity subgroup, including 95% CIs. Nonbinary F, nonbinary adolescents assigned female at birth; Nonbinary M, nonbinary adolescents assigned male at birth; SM, sexual minority.

associated with mental health outcomes among TGA subgroups.

As noted above, the GMY Study included a large sample of adolescents who were racially diverse, and participants resided in all 50 states. The current study achieved a 2.5% click-through rate during recruitment. Although this rate is similar to other recent online studies of sexual minority and transgender youth,^{37,38} it is possible that adolescent social media users who have experienced mental or physical health problems were more likely to click on an ad for a “health” study than those who have not, and these youth may disproportionately report childhood abuse. However, rates of physical and sexual abuse reported by participants in the data set are comparable to rates within other data sets of adolescents. For example, 27% of sexual minority CGAs reported physical abuse (19%–33% reported physical abuse in a large meta-analysis),²³ and ORs

between TGAs and CGAs in adjusted models were similar to those found in a recent statewide survey.²⁵ These qualities of the GMY Study data set indicate our results could generalize to the broader population of adolescents in the United States. However, our sample is not nationally representative, and it is critical that future nationally representative surveys of adolescents in the United States, such as the Youth Risk Behavior Surveillance System, assess both the sex assigned at birth and current gender identity to enable the accurate identification and categorization into subgroups of TGAs in a nationally representative data set.

In addition, the current study is limited by its cross-sectional design. Although abuse experiences could be more common among TGAs before their identification as TGAs because of gender nonconformity during childhood,^{19,20} abuse could

also have onset and/or exacerbation after their identification as TGAs. For example, TGAs often report parental rejection after disclosure of their gender identity to parents,¹⁸ potentially resulting in onset of abuse by parents. Longitudinal studies of TGAs across development could shed light on how gender identity development, abuse, and mental health are related over time. Furthermore, the GMY Study battery included only assessments of psychological, physical, and sexual abuse, and did not include assessment of other experiences, such as parental neglect or witnessing domestic abuse between parents. This limitation makes it difficult to examine polyvictimization in this data set. Finally, our sample included fewer TGAs assigned male at birth than TGAs assigned female at birth, and this altered sex ratio is common within samples of TGAs.³⁹ However, this may have limited our power to detect differences between TGAs assigned male and CGAs in the present analyses.

It is recommended that pediatric medical and mental health professionals screen for child abuse to recognize and respond to ongoing maltreatment among children and adolescents,⁴⁰ and this recommendation should apply to TGAs presenting for care. Given the higher risk for psychological abuse by parents and other adults among TGAs assigned female at birth in this sample, providers should pay particular attention to parent-adolescent relationships when treating this population. Because some families of TGAs are rejecting of their gender identity,¹⁸ providers should assess gender identity privately without parents present if possible, including level of parental knowledge of gender identity among TGAs. This approach will optimize the possibility that TGAs are open

TABLE 2 Adjusted ORs and 95% CIs for Each Abuse Outcome for Heterosexual Cisgender, Sexual Minority Cisgender, and Transgender Groups and Covariates

Variable	aOR (95% CI)		
	Emotional Abuse	Physical Abuse	Sexual Abuse
Gender identity and sexual orientation (heterosexual cisgender reference)			
Sexual minority cisgender	1.10 (0.82–1.48)	1.27 (0.92–1.75)	1.87 (1.15–3.04)*
Transgender	1.84 (1.40–2.41)**	1.61 (1.21–2.14)**	2.04 (1.32–3.16)**
Gender assigned at birth (female reference)			
Male	0.60 (0.46–0.78)**	0.94 (0.71–1.24)	0.48 (0.31–0.74)**
Race (white reference)			
Black or African American	1.34 (0.92–1.95)	1.91 (1.35–2.67)**	0.93 (0.57–1.51)
Hispanic	1.53 (1.04–2.26)*	1.83 (1.30–2.59)**	1.69 (1.12–2.57)**
Asian American or Pacific Islander	1.16 (0.69–1.95)	1.96 (1.18–3.26)	1.36 (0.67–2.76)
Native American or other	2.36 (0.78–7.10)	2.08 (0.92–4.72)	2.77 (1.14–6.71)**
Mixed	1.24 (0.89–1.72)	1.06 (0.78–1.45)	1.23 (0.83–1.84)
Age	0.99 (0.91–1.08)	1.04 (0.96–1.13)	1.23 (1.10–1.38)**
SSS	0.75 (0.70–0.80)**	0.79 (0.74–0.85)**	0.76 (0.69–0.83)**

aOR, adjusted odds ratio.

* $P < .05$.** $P < .01$.

about their gender identity with providers and limit the chances that interactions with providers could increase family discord related to

gender identity, which has the potential to exacerbate childhood abuse among TGAs. Family-based cognitive-behavioral interventions

could be implemented to reduce the risk of future abuse within families of TGAs,⁴¹ and TGAs who have experienced abuse should be provided access to evidence-based treatment, such as trauma-focused cognitive-behavioral therapy, to reduce mental health symptoms.^{42,43} Providers should carefully tailor their interventions to ensure their care is validating of TGAs' gender identity while limiting rejection and fostering acceptance by family members.^{44,45}

TGAs are more likely to report childhood abuse than heterosexual CGAs, and risk for psychological abuse is highest among TGAs assigned female at birth. Clinicians should be aware that higher levels of abuse could contribute to disproportionate mental health problems among TGAs, and future research should examine how childhood abuse contributes to higher levels of mental health problems among TGAs over time.

TABLE 3 Adjusted OR and 95% CIs for Each Abuse Outcome for Gender Identity Subgroups and Covariates

Variable	aOR (95% CI)		
	Psychological Abuse	Physical Abuse	Sexual Abuse
Gender identity (cisgender female reference)			
Cisgender male	0.54 (0.38–0.76)**	0.85 (0.58–1.24)	0.47 (0.25–0.88)*
Transgender male	1.68 (1.26–2.23)**	1.15 (0.87–1.53)	1.00 (0.69–1.45)
Transgender female	1.49 (0.80–2.78)	1.45 (0.82–2.56)	0.64 (0.28–1.46)
Nonbinary assigned female	1.51 (1.09–2.09)*	1.29 (0.94–1.76)	1.36 (0.91–2.03)
Nonbinary assigned male	1.09 (0.55–2.15)	1.34 (0.69–2.60)	0.63 (0.23–1.71)
Questioning gender	1.60 (0.80–3.22)	1.88 (1.03–3.50)*	1.10 (0.51–2.38)
Race (white reference)			
Black or African American	1.33 (0.91–1.94)	1.89 (1.34–2.68)**	0.92 (0.56–1.51)
Hispanic	1.53 (1.04–2.27)*	1.84 (1.30–2.60)**	1.74 (1.15–2.66)*
Asian American or Pacific Islander	1.14 (0.70–1.93)	1.95 (1.17–3.25)*	1.35 (0.66–2.75)
Native American or other	2.19 (0.73–6.62)	1.95 (0.89–4.45)	2.68 (1.11–6.51)*
Mixed	1.25 (0.90–1.73)	1.07 (0.78–1.47)	1.20 (0.81–1.80)
Sexual orientation (straight reference)			
Gay or lesbian	1.01 (0.71–1.45)	1.15 (0.79–1.66)	1.28 (0.74–2.22)
Bisexual or pansexual	1.20 (0.89–1.61)	1.30 (0.95–1.77)	1.76 (1.11–2.78)*
Queer, other, or questioning	1.00 (0.70–1.44)	1.24 (0.85–1.81)	1.63 (0.96–2.76)
Age	0.99 (0.90–1.08)	1.04 (0.95–1.13)	1.22 (1.09–1.37)**
SSS	0.75 (0.70–0.81)**	0.79 (0.74–0.85)**	0.76 (0.69–0.83)**

aOR, adjusted odds ratio.

* $P < .05$.** $P < .01$.

ABBREVIATIONS

CGA: cisgender adolescent
 CI: confidence interval
 GMY: gender minority youth
 OR: odds ratio
 SSS: subjective social status
 TGA: transgender adolescent

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Suicidality Disparities Between Transgender and Cisgender Adolescents

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abstract

BACKGROUND AND OBJECTIVES: Emerging evidence indicates transgender adolescents (TGAs) exhibit elevated rates of suicidal ideation and attempt compared with cisgender adolescents (CGAs). Less is known about risk among subgroups of TGAs because of limited measures of gender identity in previous studies. We examined disparities in suicidality across the full spectrum of suicidality between TGAs and CGAs and examined risk for suicidality within TGA subgroups.

METHODS: Adolescents aged 14 to 18 completed a cross-sectional online survey ($N = 2020$, including 1148 TGAs). Participants reported gender assigned at birth and current gender identity (categorized as cisgender males, cisgender females, transgender males, transgender females, nonbinary adolescents assigned female at birth, nonbinary adolescents assigned male at birth, and questioning gender identity). Lifetime suicidality (passive death wish, suicidal ideation, suicide plan, suicide attempt, and attempt requiring medical care) and nonsuicidal self-injury were assessed.

RESULTS: Aggregated into 1 group, TGAs had higher odds of all outcomes as compared with CGAs. Within TGA subgroups, transgender males and transgender females had higher odds of suicidal ideation and attempt than CGA groups.

CONCLUSIONS: In this study, we used comprehensive measures of gender assigned at birth and current gender identity within a large nationwide survey of adolescents in the United States to examine suicidality among TGAs and CGAs. TGAs had higher odds of all suicidality outcomes, and transgender males and transgender females had high risk for suicidal ideation and attempt. Authors of future adolescent suicidality research must assess both gender assigned at birth and current gender identity to accurately identify and categorize TGAs.

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Dr Thoma conceptualized and designed the study, collected data, analyzed the data, drafted the initial manuscript, and reviewed and revised the manuscript; Drs Salk and Choukas-Bradley conceptualized and designed the study, collected data, drafted the initial manuscript, and reviewed and revised the manuscript; Drs Goldstein, Levine, and Marshal contributed to the conceptualization and design of the study and critically reviewed the manuscript for important intellectual content; and all authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

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WHAT'S KNOWN ON THIS SUBJECT: Although initial evidence indicates transgender adolescents (TGAs) have high rates of suicidality, previous studies have been limited by insufficient measurement of gender identity. TGAs assigned female at birth could have higher rates of suicidality than TGAs assigned male at birth.

WHAT THIS STUDY ADDS: Using comprehensive measures of gender assigned at birth and current gender identity to examine TGA suicidality, we indicate transgender males and transgender females have higher odds of suicidal ideation and attempt than their cisgender peers.

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ARTICLE

Suicide is the second leading cause of death among adolescents in the United States,¹ and adolescent suicide rates have increased over the past 2 decades.² It is indicated in emerging evidence that transgender adolescents (TGAs; adolescents whose true gender identity diverges from their gender assigned at birth) are at higher risk for suicidality when compared with cisgender adolescents (CGAs; adolescents whose gender identity is the same as their gender assigned at birth).³⁻⁸ In initial studies, 34% of TGAs report experiencing suicidal ideation during the past year,⁶ 61% report experiencing suicidal ideation during their lifetime,⁵ and 30% to 51% of TGAs report at least 1 lifetime suicide attempt.^{5,7} Furthermore, over half of TGAs report engaging in nonsuicidal self-injury (NSSI) during the past year.^{5,9} Elevated rates of suicidality likely result from disproportionate amounts of psychosocial stress, including victimization experienced by TGAs,^{5,10,11} and experiences of discrimination could be more prevalent among TGAs who have widely disclosed their gender identity to others.¹²

Much previous research on TGA suicidality has been conducted with small convenience or clinical samples of TGAs,^{4,13-15} and existing secondary analyses of large adolescent health data sets in the United States have been limited by insufficient assessment of gender identity.⁵⁻⁷ To identify TGAs accurately, researchers must use a 2-step method that assesses both gender assigned at birth and current gender identity.^{16,17} Limited measures of gender identity may have hampered researchers' ability to accurately identify all TGAs in previous studies of suicidality. For example, Perez-Brumer et al⁶ used a data set with only a single item assessing gender identity and sexual orientation, and youth were instructed to select all applicable responses: heterosexual (straight);

gay, lesbian, or bisexual; transgender; and not sure. Single items that conflate gender identity and sexual orientation could lead to errors in identifying TGAs accurately.¹⁸ Additionally, subgroup comparisons among TGAs are inhibited when suboptimal measures of gender identity are used. Subgroups of TGAs have distinct psychosocial experiences that could predict suicidality, making it important to characterize rates of suicidality within TGA subgroups. For example, transgender females report higher rates of physical and sexual assault during childhood and adolescence than other transgender individuals,¹⁹ experiences that could confer additional risk for suicidality. Emerging evidence indicates TGAs assigned female at birth are at higher risk for suicidal ideation and attempt when compared with TGAs assigned male at birth,^{5,7,14} but researchers have often been limited to comparing TGAs on the basis of gender assigned at birth without fully accounting for the diversity of current gender identities.⁵ Many TGAs identify as nonbinary, genderqueer, or agender (ie, they do not strongly identify with either male or female identities), and only 1 previous study has examined suicidality among nonbinary TGAs separately.⁷ Toomey et al⁷ found that nonbinary TGAs had lower rates of suicide attempts than transgender males but higher rates than transgender females. Importantly, the data set used allowed adolescents to only endorse "do not identify as exclusively male or female" without including specific nonbinary gender identities when assessing current gender identity, potentially leading to miscategorization of some TGAs. Finally, no previous study has examined differences in suicidality separately among nonbinary TGAs assigned male or female at birth. Gender assigned at birth predicts suicidality among all adolescents,²⁰ and it is imperative to examine suicidality among TGA subgroups that

have been subdivided by gender assigned at birth.

Furthermore, previous work has only included 1 or 2 suicidality outcomes, precluding examination of disparities between TGAs and CGAs across the full spectrum of suicidality, including passive death wish, planning a suicide attempt, and making a suicide attempt that required medical care. Examining these additional outcomes is vital because more severe suicidal ideation predicts future suicidal behavior,^{21,22} which predicts greater lethality of attempt, which in turn predicts death by suicide.^{23,24} Thus, to enhance risk assessment with this vulnerable population, it is critical to characterize disparities across the spectrum of suicidality.

In the current study, we used a large, nationwide survey of adolescents that was designed to examine suicidality disparities between TGAs and CGAs by using comprehensive measures of both gender assigned at birth and current gender identity. Our first aim was to compare rates of suicidality among TGAs, aggregated into 1 group, to those of CGAs in the United States. Second, given limitations in previous secondary data analyses with regard to measures of gender identity, we sought to document and compare rates of suicidality among TGA subgroups.

METHODS

Procedure

We conducted a cross-sectional online survey to recruit CGAs and TGAs from July to October 2018. Participants were recruited via advertisements on Facebook and Instagram, social media platforms used by the majority of adolescents.²⁵ TGAs are a hidden population, and our social media recruitment procedures reached a diverse sample of TGAs. Forty-one percent of TGAs in our sample had not disclosed their gender identity to their parents, and

6% indicated no one knew of their gender identity. Furthermore, data were collected anonymously and privately on participants' own devices; researchers recommend private collection of suicidality data to optimize self-report accuracy.^{26,27} Two sets of advertisements targeted users ages 14 to 18 in the United States. One had additional targets to reach TGAs by using interest labels such as "Transgender," "Gender-specific and gender-neutral pronouns," "Genderqueer," and "Passing (gender)." Almost all TGAs entered the survey through the TGA-specific advertisement, and CGAs who entered through the TGA-specific advertisement were more likely to identify their sexual orientation as gay or lesbian rather than heterosexual. There were no other demographic differences among cisgender participants entering through the 2 different advertisement sets.

All participants provided assent (with a waiver of parental permission) before completing questionnaires hosted on a secure server. Participants had the opportunity to enter a drawing for a \$50 gift card. All participants endorsing suicidality were provided mental health resources, including 24-hour suicide hotlines. The University of Pittsburgh's Human Research Protection Office approved this study.

Advertisements were served 377 469 times, and 8747 clicks were recorded (2.48% click-through rate). A total of 5642 participants assented and began the survey. Adolescents were screened out if they were outside the targeted age range. Additionally, recruitment of TGAs assigned male at birth was slower than other groups, so we adopted a screening procedure during the last 4 weeks of recruitment to recruit only these participants. In total, 1997 participants were screened out of the survey.

Multiple steps were taken to ensure the quality of collected data. First, Internet Protocol addresses were used to identify potential duplicate cases, and cases with the same Internet Protocol address were reviewed by hand. Duplicates with the same demographic characteristics and height and/or weight were removed ($n = 320$). Second, outlier analysis indicated that no cases had evidence of values outside the expected range on height, weight, and variables reported as counts. Third, free-response text was reviewed, and 7 cases were removed that had inappropriate responses to survey questions. Finally, 3 items from the Minnesota Multiphasic Personality Inventory infrequency scale²⁸ were included to identify participants who had responded carelessly or randomly.²⁹ Sensitivity analyses indicated the overall pattern of results did not change in logistic regression models when participants with high scores on this scale were omitted from analysis, so all cases were retained.

For the current analysis, 2020 participants who completed the survey through the suicidality questions were included. Compared to the full sample of 3318, these 2020 participants were older, more likely to identify as cisgender female or transgender male, and more likely to identify as bisexual or pansexual.

Measures

Gender Identity

Gender assigned at birth was assessed as male, female, or intersex. Intersex participants were excluded because of a low base rate ($n = 11$) and difficulty categorizing them as either male or female assigned at birth, a key component for the current study. Participants selected all gender identities that were applicable: "male," "female," "transgender," "female-to-male transgender/FTM," "male-to-female transgender/MTF," "trans male/"

transmasculine," "trans female/transfeminine," "genderqueer," "gender expansive," "intersex," "androgynous," "nonbinary," "two-spirited," "third gender," "agender," "not sure," and "other." A 7-category gender identity variable was created, including cisgender male; cisgender female; transgender male (including participants who reported female gender assigned at birth and male, female-to-male transgender/FTM, and/or trans male or transmasculine identities); transgender female (including participants who reported male gender assigned at birth and female, male-to-female transgender/MTF, and/or trans female or transfeminine identities); nonbinary assigned female at birth; nonbinary assigned male at birth; and questioning gender identity (including participants who selected not sure and no other gender identities). Adolescents were categorized as nonbinary if they reported a genderqueer, gender expansive, intersex, androgynous, nonbinary, two-spirited, third gender, or agender gender identity and no binary gender identities. In other words, adolescents were not categorized as "nonbinary" if they selected any of the binary identities. This approach to categorization was supported by post hoc analyses examining group means of suicidality outcomes, which indicated that TGAs who selected a combination of binary and nonbinary identities were more similar to TGAs who selected only binary identities than to TGAs who selected only nonbinary identities. Questioning adolescents could not be divided by gender assigned at birth because of small cell sizes.

Suicidality

All suicidality items assessed lifetime ideation or behavior and were dichotomized (0 = none; 1 = any). Items were adapted from the Youth Risk Behavior Survey and the Columbia-Suicide Severity Rating Scale, which are both reliable and

valid with adolescents.^{30,31} Passive death wish was assessed with the question “Have you ever wished you were dead?” Suicidal ideation was assessed with “Have you ever seriously thought about killing yourself?” Planning a suicide attempt was assessed with “Have you ever made a plan about how you would kill yourself?” Suicide attempt was assessed with “In your lifetime, how many times have you actually tried to kill yourself?” Suicide attempt requiring medical care was assessed with “Did any suicide attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?” NSSI was assessed with “In your lifetime, have you ever done anything to purposefully hurt yourself without wanting to die (for example, cutting your skin or burning yourself)?”

Demographic Variables

Participants reported their age, race and/or ethnicity (coded as white, African American, Latinx, Asian American or Pacific Islander, mixed, and American Indian or other), and sexual orientation (coded as heterosexual; gay or lesbian; bisexual or pansexual; and queer, questioning, or other). Subjective social status (SSS) was measured with the McArthur Scale of Subjective Social Status, a measure of adolescents’ perceptions of their family’s social status as compared with all other families in American society, visualized by a 10-rung ladder.³²

Participants

Table 1 includes descriptive demographic information for the full sample, for CGAs, for TGAs (including nonbinary and questioning adolescents), and for each gender identity subgroup. According to zip codes, participants lived in all 50 states as well as Washington, District of Columbia and Puerto Rico. CGAs were similar to nationally representative data with regard to race and/or ethnicity. Compared with

CGAs, TGAs were more likely to report white race and/or ethnicity, minority sexual orientations, older age, and lower SSS.

Analysis

First, descriptive data for each suicidality outcome were examined for TGAs, CGAs, and each gender identity subgroup. Second, χ^2 tests, including pairwise comparisons between each gender identity subgroup on each suicidality outcome, were conducted for outcomes using SPSS version 25 (IBM SPSS Statistics, IBM Corporation). Bonferroni corrections were applied to significance levels to account for multiple comparisons ($n = 21$; $P < .002$). Third, multivariate logistic regression models were estimated to examine the odds of each outcome for TGAs (aggregated into 1 group) compared with CGAs while adjusting for gender assigned at birth, age, SSS, race and/or ethnicity, and sexual orientation. Finally, multivariate logistic regression models were estimated for each dichotomized suicidality outcome predicted by gender identity (coded as 7 subgroups) while controlling for covariates. Fewer than 2% of participants had missing data, and listwise deletion was used to account for missingness in all models.

RESULTS

Unadjusted Results

Percentages, along with 95% confidence intervals (CIs), of TGAs, CGAs (including rates for sexual minority and heterosexual CGAs), and participants in each gender identity subgroup endorsing each dichotomized suicidality outcome are presented in Table 2. Means and SEs were multiplied by 100 to transform to a percentage metric before calculating CIs. Within bivariate subgroup comparisons, each χ^2 omnibus test was significant (all P values $< .001$), indicating each

suicidality outcome varied significantly across the 7 gender identity categories. Pairwise comparisons (see Table 2) indicated that transgender males, transgender females, and nonbinary adolescents assigned female at birth reported higher rates of suicidal ideation and suicide attempt as compared with either cisgender group. Transgender males and nonbinary adolescents assigned female at birth reported higher rates of passive death wish, planning a suicide attempt, and suicide attempt requiring medical care as compared with either cisgender group. Transgender males and nonbinary adolescents assigned female at birth reported higher rates of NSSI than CGAs and transgender females.

Adjusted Results

In the first set of adjusted logistic regression models, TGAs (aggregated into 1 group) had higher odds of lifetime passive death wish (odds ratio [OR] = 2.60), suicidal ideation (OR = 2.20), suicide plan (OR = 1.82), suicide attempt (OR = 1.65), attempt requiring medical care (OR = 2.01), and NSSI (OR = 2.88) when compared with CGAs. Results of adjusted logistic regression analyses examining odds of suicidality in gender identity subgroups as compared with the cisgender male reference group are presented in Table 3. After adjusting for all demographics, cisgender females, transgender males, and nonbinary adolescents assigned female at birth had higher odds of each suicidality outcome. Transgender females had higher odds of each outcome except for suicide attempt requiring medical care. Nonbinary adolescents assigned male at birth had higher odds of suicide attempt requiring medical care and NSSI. Adolescents questioning their gender identity had higher odds of all outcomes except for suicide attempt. Finally, we contrast coded gender identity to compare all gender identity groups to cisgender females

TABLE 1 Demographics Characteristics for Total Sample, CGAs, TGAs, and Gender Identity Subgroups

	Total Sample (N = 2020)	All Cisgender (n = 872)	All Transgender (n = 1148)	Cisgender Males (n = 218)	Cisgender Females (n = 654)	Transgender Males (n = 616)	Transgender Females (n = 63)	Nonbinary Assigned Female (n = 375)	Nonbinary Assigned Male (n = 43)	Questioning (n = 51)
Categorical variables, n (%)										
Race and/or ethnicity										
White	1328 (65.7)	545 (62.5)	783 (68.2)	134 (61.5)	411 (62.8)	419 (68.0)	46 (73.0)	265 (70.7)	24 (55.8)	29 (56.9)
African American	175 (8.7)	89 (10.2)	86 (7.5)	17 (7.8)	72 (11.0)	46 (7.5)	2 (3.2)	26 (6.9)	7 (16.3)	5 (9.8)
Latinx	182 (9.0)	90 (10.3)	92 (8.0)	22 (10.1)	68 (10.4)	53 (8.6)	4 (6.3)	24 (6.4)	4 (9.3)	7 (13.7)
Asian American or Pacific Islander	76 (3.8)	48 (5.5)	28 (2.4)	12 (5.5)	36 (5.5)	15 (2.4)	3 (4.8)	8 (2.1)	0 (0.0)	2 (3.9)
American Indian	24 (1.2)	8 (0.9)	16 (1.4)	2 (0.9)	6 (0.9)	5 (0.8)	2 (3.2)	7 (1.9)	0 (0.0)	2 (3.9)
Mixed	225 (11.1)	86 (9.9)	139 (12.1)	28 (12.8)	58 (8.9)	75 (12.2)	6 (9.5)	45 (12.0)	8 (18.6)	5 (9.8)
Other	9 (0.4)	5 (0.6)	4 (0.3)	2 (0.9)	3 (0.5)	3 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	1 (2.0)
Sexual orientation										
Straight or heterosexual	416 (20.6)	381 (43.7)	35 (3.0)	118 (54.1)	263 (40.2)	28 (4.5)	2 (3.2)	1 (0.3)	1 (2.3)	3 (5.9)
Gay or lesbian	312 (15.4)	106 (12.2)	206 (17.9)	50 (22.9)	56 (8.6)	125 (20.3)	15 (23.8)	49 (13.1)	13 (30.2)	4 (7.8)
Bisexual or pansexual	875 (43.3)	310 (35.6)	565 (49.2)	46 (21.1)	264 (40.4)	291 (47.2)	34 (54.0)	193 (51.5)	15 (34.9)	32 (62.7)
Queer or other	385 (19.1)	55 (6.3)	330 (28.7)	3 (1.4)	52 (8.0)	163 (26.5)	10 (15.9)	132 (35.2)	14 (32.6)	11 (21.6)
Questioning	14 (0.7)	7 (0.8)	7 (0.6)	1 (0.5)	6 (0.9)	5 (0.8)	1 (1.6)	0 (0.0)	0 (0.0)	1 (2.0)
Continuous variables mean (SD)										
Age	15.9 (1.2)	15.9 (1.1)	16.0 (1.2)	16.0 (1.1)	15.8 (1.1)	16.0 (1.2)	16.2 (1.2)	15.9 (1.2)	16.2 (0.9)	15.6 (1.1)
SSS	5.7 (1.6)	6.0 (1.6)	5.4 (1.5)	6.0 (1.7)	6.0 (1.5)	5.4 (1.5)	5.1 (1.5)	5.6 (1.6)	5.4 (1.4)	5.2 (1.3)

and completed post hoc adjusted analyses examining suicidal ideation and attempts. These models indicated that transgender males and transgender females, but no other TGA subgroups, had higher odds of suicidal ideation and attempt when compared with cisgender females (see Table 4).

DISCUSSION

In this study, we used comprehensive measures of gender assigned at birth and current gender identity within a large nationwide survey of adolescents in the United States to examine suicidality among TGAs and CGAs. As in previous research,^{3,5-8,13} TGAs had higher odds of experiencing suicidality compared with CGAs. This pattern of results was observed in both adjusted and unadjusted models for most outcomes. When aggregated into 1 group, TGAs had higher odds of reporting each outcome when compared with CGAs in adjusted models. Results document that TGAs have higher odds of engaging in suicidal behavior requiring medical care, which could predispose them to additional future suicide attempts and increase their risk for death by suicide.

The current study advances our understanding of which subgroups of TGAs are at risk for suicidality. Transgender males and transgender females had higher rates of suicidal ideation and attempt than male and female CGAs in adjusted models, and nonbinary adolescents assigned female at birth had higher risk than male CGAs in adjusted models examining ideation and attempt. These results for transgender males and nonbinary adolescents assigned female at birth are consistent with previous findings indicating that TGAs assigned female at birth were at highest risk for suicidal ideation and attempt.^{5,7,14} However, the results for transgender females diverge from previous results in which authors

TABLE 2 Lifetime Prevalence of Suicidality Outcomes Within Gender Identity Groups, Including Unadjusted Pairwise Comparisons Between Gender Identity Subgroups

Suicidality Outcome	All Cisgender	Cisgender Minority	Cisgender Sexual Heterosexual	All Cisgender Transgender	Cisgender Males	Cisgender Females	Transgender Males	Transgender Females	Nonbinary Assigned Female	Nonbinary Assigned Male	Questioning
Passive death wish	77.0	84.7	68.2	94.3	61.9	82.1	96.4	93.7	92.3	86.0	92.2
95% CI	74.2–79.8	81.5–87.9	63.5–72.9	93.0–95.6	55.4–68.4	79.2–85.0	94.9–97.9	87.6–99.8	89.6–95.0	75.5–96.5	84.7–99.7
Significance ^a	—	—	—	—	A	B	C	B, C, D	C, D	B, D	B, C, D
Suicidal ideation	60.4	70.4	48.2	84.8	46.5	65.0	88.6	90.5	79.2	72.1	82.4
95% CI	57.1–63.7	66.3–74.5	43.2–53.2	82.7–86.9	39.8–53.2	61.3–68.7	86.1–91.1	83.2–97.8	75.1–83.3	58.5–85.7	71.8–83.0
Significance ^a	—	—	—	—	A	B	C	C, D	D	B, D	B, C, D
Planning attempt	49.8	57.6	40.7	72.5	37.6	53.8	75.6	73.0	69.6	48.8	72.5
95% CI	46.5–53.1	53.2–62.0	35.8–45.6	70.0–75.1	31.2–44.0	50.0–57.6	72.2–79.0	62.0–84.0	64.9–74.3	33.7–63.9	60.1–84.9
Significance ^a	—	—	—	—	A	B	C	B, C, D	C, D	A, B, D	B, C, D
Suicide attempt	31.4	37.9	23.4	50.3	24.3	33.8	54.5	57.1	44.3	44.2	41.2
95% CI	28.3–34.5	33.6–42.2	19.1–27.7	47.4–53.2	18.6–30.0	30.2–37.4	50.6–58.4	44.8–69.4	39.3–49.3	29.2–59.2	27.6–54.8
Significance ^a	—	—	—	—	A	A	B	B, C	C	A, B, C	A, B, C
Attempt requiring medical care	5.6	7.5	3.2	13.2	1.4	7.0	15.4	6.3	10.9	14.0	9.8
95% CI	4.1–7.1	5.2–9.8	1.4–5.0	11.2–15.2	0.0–2.9	5.0–9.0	12.5–18.3	0.2–12.4	7.7–14.1	3.5–24.5	1.6–18.0
Significance ^a	—	—	—	—	A	B	C	A, B, C	B, C	B, C	B, C
NSSI	59.1	68.5	47.8	86.9	38.9	65.9	89.4	73.0	87.6	76.7	76.5
95% CI	55.8–62.4	64.3–72.7	42.8–52.8	84.9–88.9	32.4–45.4	62.2–70.0	87.0–91.8	62.0–84.0	84.2–91.0	63.9–89.5	64.7–88.3
Significance ^a	—	—	—	—	A	B	C	B	C	B, C	B, C

—, not applicable.

^a Each letter denotes gender identity subgroups that do not differ significantly from each other at the 0.002 level within unadjusted pairwise comparisons for each outcome.

found relatively lower rates of suicidality among transgender females as compared with other TGAs.^{5,7} Given that subsample sizes for TGAs assigned male at birth were small in the current study, findings among this subgroup must be interpreted with caution. Limited measures of gender identity may have led to inaccurate estimates of suicidality among transgender females in previous studies. Transgender females and nonbinary adolescents assigned male at birth have often been combined into 1 group when examining subgroup differences in suicidality among TGAs.⁵ However, our results indicate transgender females have higher risk for suicidal ideation and attempt compared with CGAs, whereas nonbinary adolescents assigned male at birth do not. Thus, it is possible that estimates of suicidality that aggregate all TGAs assigned male at birth into 1 group underestimate rates of suicidality among transgender females. Our findings indicate comprehensive measurement of both gender assigned at birth and current gender identity is important to understand subgroup rates of suicidality among TGAs.

Although our sample is not nationally representative, participants came from every state, and CGAs were similar to representative data regarding race and/or ethnicity. However, rates of suicidality among both CGAs and TGAs appear higher in the current sample compared to other samples of adolescents,^{7,33,34} and this could result from several factors. First, we collected suicidality data using a lifetime timeframe, making it difficult to compare to recent epidemiological estimates of adolescent suicidality in the United States, which all use a past-year timeframe.³⁴ Second, rates of suicidality among CGAs were likely inflated because of oversampling of females and lesbian, gay, and bisexual adolescents, who have well-

TABLE 3 aORs and 95% CIs for Each Lifetime Suicidality Outcome for Gender Identity Subgroups and Covariates

Variable	Passive Death Wish	Suicidal Ideation	Planning Attempt	Suicidal Attempt	Attempt Requiring Medical Care	NSSI
	aOR (95% CI)	aOR (95% CI)	aOR (95% CI)	aOR (95% CI)	aOR (95% CI)	aOR (95% CI)
Gender identity (cisgender male reference)						
Cisgender female	2.53 (1.76–3.64)*	2.04 (1.46–2.84)*	1.90 (1.37–2.64)*	1.49 (1.03–2.15)*	5.85 (1.79–19.16)*	3.02 (2.16–4.23)*
Transgender male	9.39 (5.41–16.27)*	5.64 (3.77–8.42)*	3.82 (2.66–5.50)*	2.72 (1.86–3.99)*	12.12 (3.70–39.66)*	9.65 (6.41–14.54)*
Transgender female	4.52 (1.53–13.32)*	6.30 (2.54–15.58)*	2.98 (1.56–5.68)*	2.90 (1.56–5.40)*	3.91 (0.83–18.40)	2.73 (1.42–5.23)*
Nonbinary assigned female	4.06 (2.37–6.96)*	2.77 (1.83–4.19)*	2.82 (1.90–4.17)*	1.84 (1.22–2.78)*	8.59 (2.55–28.97)*	8.22 (5.21–12.99)*
Nonbinary assigned male	2.11 (0.82–5.43)	1.76 (0.83–3.73)	1.09 (0.55–2.15)	1.75 (0.86–3.54)	10.13 (2.36–43.51)*	3.79 (1.73–8.31)*
Questioning gender	3.68 (1.23–10.98)*	3.33 (1.50–7.39)*	3.23 (1.61–6.49)*	1.48 (0.76–2.90)	7.59 (1.70–33.83)*	3.64 (1.75–7.57)*
Race and/or ethnicity (white reference)						
African American	1.27 (0.73–2.21)	1.23 (0.82–1.83)	1.12 (0.79–1.58)	1.41 (1.10–1.97)*	1.05 (0.61–1.81)	0.83 (0.56–1.23)
Latinx	1.26 (0.73–2.17)	1.04 (0.70–1.54)	1.31 (0.92–1.86)	1.51 (1.09–2.11)*	1.57 (0.98–2.52)	0.99 (0.66–1.48)
Asian American or Pacific Islander	0.74 (0.40–1.39)	0.99 (0.58–1.69)	1.04 (0.64–1.70)	1.28 (0.78–2.10)	1.14 (0.47–2.73)	0.46 (0.28–0.77)*
American Indian or other	1.74 (0.39–7.77)	1.25 (0.48–3.22)	2.04 (0.85–4.90)	2.61 (1.22–5.59)*	1.68 (0.61–4.59)	1.59 (0.57–4.42)
Mixed	0.87 (0.55–1.38)	1.28 (0.88–1.86)	1.18 (0.86–1.61)	1.01 (0.74–1.36)	1.03 (0.63–1.68)	0.91 (0.63–1.32)
Sexual orientation (straight reference)						
Gay or lesbian	1.72 (1.11–2.67)*	2.37 (1.64–3.44)*	1.90 (1.35–2.66)*	1.57 (1.11–2.23)*	1.71 (0.92–3.17)	2.03 (1.39–2.97)*
Bisexual or pansexual	3.24 (2.22–4.74)*	2.51 (1.88–3.37)*	1.81 (1.38–2.38)*	1.76 (1.32–2.36)*	1.34 (0.77–2.31)	2.18 (1.63–2.93)*
Queer, other, or questioning	1.92 (1.17–3.14)*	1.91 (1.32–2.77)*	1.64 (1.17–2.30)*	1.55 (1.10–2.20)*	0.97 (0.52–1.83)	1.41 (0.97–2.07)
Age	1.13 (1.00–1.29)	1.08 (0.98–1.19)	1.14 (1.04–1.23)*	1.14 (1.05–1.24)*	1.26 (1.10–1.43)*	1.06 (0.96–1.17)
SSS	0.81 (0.74–0.90)*	0.84 (0.78–0.90)	0.89 (0.84–0.95)*	0.83 (0.78–0.88)*	0.90 (0.81–0.99)*	0.89 (0.82–0.96)*

* $P < .05$.

documented elevations in suicidality.^{20,35} Importantly, adjusted odds ratios (aORs) comparing TGA subgroups to male CGAs on suicide attempts were larger in the current study than those observed in the Toomey et al⁷ study (range of 1.7–2.9 vs 1.0–1.5), so potentially higher rates of suicidality among CGAs did not suppress ORs in our data. Third, our data were collected through an anonymous, online survey completed on adolescents' own devices. This diverges from school-based surveys

used in other large-scale studies of TGA suicidality in which adolescents complete questionnaires in classrooms shared with their peers.^{5–7} Anonymous, private collection of suicidal ideation and NSSI self-reports approximately doubles endorsement of these items, leading to more accurate reports.^{26,27} Finally, recent research indicates the amount of time adolescents use electronic media may be associated with suicidality,³⁶ possibly inflating rates of suicidality in each gender

identity group given our social media recruitment strategy. However, the vast majority of adolescents now have a smartphone and use social media,²⁵ and both TGAs and CGAs were recruited through the same social media platforms. Future nationally representative studies of adolescents in the United States should use measures of both gender assigned at birth and current gender identity to accurately identify TGAs and examine risk for suicidality among TGA subgroups.

Our sample is limited by the inclusion of more TGAs assigned female at birth than TGAs assigned male at birth. This is common within samples of TGAs,³⁷ and transgender females are older than transgender males in recent samples of transgender adults.³⁸ Thus, it is possible that many transgender individuals assigned male at birth do not identify as transgender and begin their transition until young adulthood, leading to smaller subsamples of transgender females in adolescent

TABLE 4 aORs and 95% CIs for Suicidal Ideation and Suicide Attempt for Gender Identity in Post Hoc Contrast Coded Models With Cisgender Females as Reference Group

Variable	Suicidal Ideation	Suicide Attempt
	aOR 95% CI	aOR 95% CI
Gender identity (cisgender female reference)		
Cisgender male	0.49 (0.35–0.68)*	0.67 (0.47–0.97)*
Transgender male	2.77 (2.00–3.83)*	1.83 (1.42–2.37)*
Transgender female	3.09 (1.29–7.42)*	1.95 (1.12–3.39)*
Nonbinary assigned female	1.36 (0.97–1.91)	1.24 (0.92–1.66)
Nonbinary assigned male	0.86 (0.42–1.76)	1.18 (0.62–2.25)
Questioning gender	1.64 (0.77–3.49)	1.00 (0.54–1.82)

Models adjusted for race and/or ethnicity, sexual orientation, age, and SSS, and these covariates are reported in Table 3.

* $P < .05$.

samples. Small cell sizes in the transgender female and nonbinary assigned male at birth groups may have led to imprecise estimates of suicidality in these groups, and subgroup comparisons involving these groups may have been underpowered. Despite this limitation, our results indicate transgender females are at high risk for suicidal ideation and attempt. Researchers should recruit adequate subsamples of TGAs assigned male at birth in future studies of suicidality. Additionally, the current study was limited by its cross-sectional design. In future work, researchers should examine how gender identity and suicidality are associated over time during adolescence. In this anonymous online study, we were unable to query imminent risk for suicide and were limited to assessing lifetime prevalence of suicidality, making it difficult to examine psychosocial predictors of suicidality.

TGA suicidality is likely predicted by minority stress experiences, including victimization targeting their stigmatized gender identity.^{11,13,39,40} In future work, researchers should examine how psychosocial stressors contribute to both the onset of suicidal ideation as well as the transition from suicidal ideation to suicide attempt among TGAs.

CONCLUSIONS

TGAs are at high risk for suicidal ideation and behavior, and researchers should include comprehensive measures of gender assigned at birth and current gender identity to accurately characterize TGA subgroup differences in future suicidality studies. Our results indicate transgender males, transgender females, and nonbinary adolescents assigned female at birth are at especially high risk for suicidal ideation and attempt. TGAs should be

prioritized in future research examining adolescent suicidality, including explicating mechanisms of suicidality among TGAs to inform future intervention and prevention strategies designed to reduce suicidality within this vulnerable population.

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ABBREVIATIONS

aOR: adjusted oddsratio
CGA: cisgender adolescent
CI: confidence interval
NSSI: nonsuicidal self-injury
OR: oddsratio
SSS: subjective social status
TGA: transgender adolescent

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SCHOOL CULTURE AND THE WELL-BEING OF SAME-SEX- ATTRACTED YOUTH

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This study assesses how variations in heteronormative culture in high schools affect the well-being of same-sex-attracted youth. The authors focus on the stigmatization of same-sex attraction (rather than identity or behavior) to better understand how heteronormativity may marginalize a wide range of youth. Specifically, the authors use data from the National Longitudinal Study of Adolescent Health to examine how variation across schools in football participation, religious attendance, and urban locale affects same-sex-attracted adolescents' depressive symptoms, self-esteem, fighting, and academic failure. The results suggest that though same-sex-attracted youth are at greater risk for decreased well-being, these youth are at higher risk in nonurban schools and in schools where football and religion have a larger presence. Results vary for boys and girls: The urban locale of a school has a larger impact for boys, while school religiosity has a greater impact for girls.

Keywords: *adolescent/children; sexuality; education*

Schools can be an unwelcoming environment for adolescents with nonheterosexual feelings, behaviors, and identities. In schools, as in the broader culture, heterosexuality is often assumed and institutionally enforced through rituals, daily interactions between students and teachers, and the curriculum (Chesir-Teran 2003). This heteronormativity can be explicit, including homophobic name-calling or verbal and physical harassment of students who deviate from normative gendered forms of sexuality (Kosciw, Diaz, and Greytak 2007). It can also be relatively subtle, perpetuated through pervasive heteronormative discourse and symbols of appropriate gender and sexual relations displayed in

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classrooms, peer groups, and extracurricular activities (Eder and Parker 1987; Nayak and Kehily 1996). Such displays of heterosexism are stigmatizing for same-sex-attracted youth and have negative effects on their well-being (D'Augelli 2002).

While research suggests that a better understanding of heteronormativity is needed to improve the well-being of sexual minority youth (Chesir-Teran 2003), little empirical work has been done to explore how dimensions of heteronormativity at an institutional level affect well-being at the individual level (Goodenow, Szalacha, and Westheimer 2006). In this study, we conceptualize heteronormativity within schools as the aggregation of staff and students' learned schemas or habitus (Bourdieu 2001; Ridgeway 2006), students' daily practices that reinforce normative expressions of gender and sexuality (Nayak and Kehily 1996; Pascoe 2007), and the visibility or school sponsorship of heteronormative institutions such as football and religion (Foley 1990; Osborne and Wagner 2007). Because of the central role schools and peers play in the lives of developing adolescents, it is important to understand schools as normative contexts that shape adolescents' well-being. This insight can further our understanding of how schools reinforce or deconstruct strongly embedded heteronormative patterns that marginalize individuals who deviate from hegemonic forms of sexuality.

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THEORETICAL BACKGROUND

Heteronormativity and Stigma

In the United States, as in most other Western societies, heterosexuality is normative and upheld in relation to other “deviant” sexualities or sexual behaviors (Butler 1990; Foucault 1978). Heteronormativity denotes “the myriad ways in which heterosexuality is produced as a natural, unproblematic, taken-for-granted, ordinary phenomenon” (Kitzinger 2005, 478) and is premised on (and supported by) a “natural” binary division of the sexes and the privileging of other-sex desire and relationships (Kitzinger 2005; Richardson 1996). Heteronormativity involves the celebration of heterosexual relationships as well as the organization of culture, including institutions, around such relationships (Foucault 1978). It also involves the celebration of socially constructed gendered behaviors that highlight the differences between men and women as well as the sanctioning of gender transgressions that disrupt this “natural” binary (Neilson, Walden, and Kunkel 2000).

Heterosexual privilege, the social construction of gender difference, and gender inequality are tightly woven and intersecting phenomena (Stein 2008). Masculinity and femininity are sexualized, and hegemonic forms of masculinity and femininity demand heterosexual desires and behaviors (Nayak and Kehily 1996; Richardson 1996). Sexual practices deemed acceptable for young men and women are those that reaffirm men’s sexual control of women and deny women’s sexual desire (MacKinnon 1987). Research on schools and adolescent peer cultures has illustrated this intersection of gender and sexuality. For example, in schools, it is often the case that being called “gay” or a “fag” is a reference not so much to boys who are romantically attracted to boys or who self-identify as gay but to boys acting “nonmasculine” (Pascoe 2007; Plummer 2001). Similarly, the “dyke” label is usually assigned to girls who do not enact the cultural scripts assigned to women (Neilson, Walden, and Kunkel 2001). Such practices not only compel boys and girls to display “appropriately” gendered behavior but also marginalize and stigmatize same-sex sexual desire. Moreover, as boys and girls “do gender” to avoid such social sanctions, they continue to create and reinforce heteronormativity (Neilson, Walden, and Kunkel 2000) within their environments.

The naturalness of heterosexuality and other-sex attraction is institutionalized in marriage, often through religion (Rubin 1999; Weeks 1985) and is more subtly reinforced through a variety of taken-for-granted cultural discourses, practices, and symbols (Kitzinger 2005). In contexts

where these discourses, practices, and symbols are widespread and institutionally supported, alternative sexual desires are marginalized and negatively sanctioned. Consequently, in heteronormative school contexts, same-sex-attracted adolescents may be stigmatized as their feelings conflict with strongly held and widely displayed normative expectations of appropriate gendered sexuality (D'Augelli 1998).

Stigma and the Well-being of Same-Sex-Attracted Youth

Amid widespread cultural discourses and practices that celebrate and enforce heterosexuality, youth who feel same-sex attractions may develop a sense of difference and internal distress. Feeling different at a time in life when the need to “fit in” is especially pronounced can be itself distressing (Crosnoe 2000), yet the stigma attached to same-sex attraction may lead same-sex-attracted youth to experience additional shame and discrimination (DiPlacido 1998). It is important that a stigma does not have to be visible or known to others to be distressing, nor does it have to be incorporated into one's identity (Goffman 1963). Consequently, adolescents with same-sex attractions may experience emotional distress, evaluate themselves negatively, or withdraw in an effort to avoid others' disapproval and rejection (Troiden 1989).

A large body of research demonstrates the consequences of stigma related to non-normative gendered sexualities. Sexual minority youth experience lower levels of social-emotional well-being than other youth (D'Augelli 2002). Research has also documented sexual minority youths' increased likelihood of being involved in fights, most often as the victims of physical harassment by peers (Kosciw, Diaz, and Greytak 2007; Russell, Franz, and Driscoll 2001) as well as the negative academic consequences of stigmatization faced by same-sex-attracted youth (Pearson, Muller, and Wilkinson 2007). Thus, because of the pervasiveness of heteronormativity in society, youth with same-sex attractions often experience feelings of difference and stigma and lower levels of well-being. However, while the impact of stigmatization on the well-being of same-sex-attracted youth has been well documented, research often neglects the diversity of school cultures and the ability of schools to reify or to subvert heteronormativity.

Organizational Culture and the Role of Schools

Schools are important socializing institutions in which young people struggle to define themselves in relation to others, particularly peers. This influence is not limited to friends: Recent research has documented the

important influence of wider social networks, rather than friends, on individual behavior and identity (Giordano 2003). Because sexuality becomes increasingly central to identity and social relationships during adolescence, schools are critical social contexts in which dominant beliefs about sexuality are played out.

Social institutions such as schools often mirror the larger structure of society, including the norms and behaviors of acceptable sexuality (Epstein and Johnson 1998). Recent theoretical explanations of organizational culture (Hallett 2007) and empirical investigations of variation in heteronormativity across schools (Goodenow, Szalacha, and Westheimer 2006) suggest that the level of stigmatization experienced by same-sex-attracted youth may vary by the school's heteronormative climate, or the degree to which hegemonic forms of sexuality organize and stratify relational contexts (Ridgeway and Correll 2004).

The level of heteronormativity within a school is created and reinforced in part through the aggregation of staff and students' cultural schemas or habitus, which include taken-for-granted outlooks, beliefs, and experiences that are carried into and developed within schools (Bourdieu 2001; Hallett 2007; Ridgeway 2006). When a greater number of individuals within a school operate within heteronormative schemas, heteronormativity acquires more legitimacy and power, creating a relational context that limits available outlets for adolescent sexuality and stigmatizes same-sex desire. Individual heteronormative schemas may be reinforced through involvement in activities such as football and religion, which involve symbolic rituals that celebrate heterosexuality and gender differences, or in the context of less tolerant and less diverse communities. Indeed, existing research on adolescent attitudes toward homosexuality and gendered expectations of behavior has linked participation in hypermasculine team sports such as football (Osborne and Wagner 2007), greater religiosity (Olson, Cadge, and Harrison 2006), and residence in nonurban communities (Stein 2001) with strongly heteronormative outlooks. Furthermore, when a predominantly heteronormative institution, such as religion, becomes largely visible within a school, it may influence school culture regardless of the heteronormativity displayed by individual students. Moreover, when activities and rituals that promote heteronormativity are organized by the school itself, such as through football, heteronormativity may be institutionally legitimated and enforced.

Prevalence of Football

As a traditionally male-dominated domain, competitive sports are often an arena in which heterosexualized gender systems are displayed and

symbolically enforced (Barron and Bradford 2007; Eder and Parker 1987; Foley 1990). In high schools, sports coaches and teammates often emphasize toughness, aggression, and stoicism, and the failure to meet these standards is associated with a lack of masculinity and heterosexuality (Messner 1992). In fact, previous research has shown that male adolescents who participate in core sports, including football, are significantly more likely than other boys to express both homophobic attitudes (Osborne and Wagner 2007) and anxiety about their performance of traditional masculinity (Nayak and Kehily 1996). When a greater proportion of the student body within a school plays football, these heteronormative attitudes may be more pervasive, dominating school culture and stigmatizing those who do not fit traditional definitions of masculinity and hegemonic male sexuality (Eder and Parker 1987). Furthermore, because high school football is a male-dominated arena in which hegemonic masculinity and male heterosexual prowess are emphasized, this aspect of school culture may have a greater impact on the well-being of same-sex-attracted boys relative to same-sex-attracted girls.

Organized high school football, as an institution, is accompanied by numerous symbolic rituals that naturalize heterosexual attractions and relationships and the social construction of gender difference. These rituals are observed by the entire student body and include pep rallies and homecoming events, where highly masculinized football players, feminized cheerleaders, and heterosexual courting rituals are overtly celebrated (Foley 1990). When a greater proportion of the student body within a school plays football, the school-sponsored rituals surrounding institutionalized football may take on more symbolic power and legitimacy, dominating school culture and stigmatizing same-sex-attracted youth.

Prevalence of Religiosity

Individuals more attached to religious institutions express higher levels of heteronormativity, exhibiting more homophobia and adherence to “traditional family values” than their less attached counterparts (Olson, Cadge, and Harrison 2006). The fundamental tenets of most of the Judeo-Christian religions predominant in U.S. society teach the restriction of sexual activity to married, heterosexual couples and label all other forms of sexuality as deviant (Greenberg and Bystryn 1982; Rubin 1999). Many major religions have created powerful rituals and beliefs that celebrate “appropriate” expressions of sexuality as a way to preserve heterosexual marriage and the traditional family unit (Greenberg and Bystryn 1982). Although heteronormative beliefs vary by religious affiliation,

with conservative affiliations being the most heteronormative, it may be the collection of many students who attend religious services regularly, regardless of affiliation, that contributes to a school culture that is less tolerant of alternative expressions of sexuality (Olson, Cadge, and Harrison 2006).

While religious condemnation of alternative expressions of sexuality is directed at both men and women, religious institutions have generally been more concerned with the sexual desire and expression of women and girls. Girls are provided with cultural scripts that deny women's sexual desire and emphasize women's obligation to fulfill the emotional and sexual needs of their husbands (rather than their own) (Heath 2009; Weeks 1985). Likely as a result of these gendered messages about sexuality, girls' sexual behavior is more influenced by their religiosity (Rostosky et al. 2004). Consequently, being situated in a context in which peers are attached to religious institutions may create greater feelings of difference and stigma for girls who experience same-sex attractions than for similarly situated boys.

School Locale

While the prevalence of religiosity and football participation within high schools may signal more heteronormative contexts, the geographic location of schools may also shape the climate within schools. Community size is positively linked to nontraditional behaviors as well as the tolerance and acceptance of such behaviors (Wilson 1995), and individuals in smaller communities generally report higher levels of homophobia and less acceptance of sexual diversity than those in larger, more urban areas (Stein 2001). Consequently, individuals in urban areas may be more tolerant and accepting of diversity, relative to those living in suburban or rural areas; therefore, schools in urban areas may display lower levels of heteronormativity. Thus, we expect that sexual minority youth may have more difficulty adjusting in schools located in rural and suburban communities, as these smaller and less urban communities may reinforce a heteronormative culture.

In addition to a more traditional and conservative culture emphasizing family values prescribed by heteronormativity, nonurban areas are also less likely to have visible gay spaces, which may soften some of the stigma and shame attached to same-sex attraction encountered in schools as well as the isolation caused by feelings of difference (Flowers and Buston 2001). Research has shown that for boys, while a school culture emphasizing sports often stigmatizes same-sex attractions and identities, the "gay scene" outside of school often serves as a safe space for exploring

non-normative sexuality and desire (Barron and Bradford 2007). In addition, it has been suggested that visible lesbian subcultures have been on the decline, even in urban areas such as San Francisco (Stein 2006), perhaps making the urban gay subculture a predominantly male scene. Thus, for same-sex-attracted youth, living in an urban environment may play more of a protective role in the lives of boys than of girls.

The purpose of the current study is to explore how school characteristics associated with heteronormativity shape the relative well-being of adolescents with same-sex romantic attractions. Specifically, we look at how the prevalence of football and level of religiosity within the school as well as the urban location of the school moderate the impact of same-sex attraction on social-emotional well-being and externalized distress. In addition, given that girls and boys are culturally scripted and expected to do sexuality and gender differently, we consider whether heteronormativity in schools affects boys and girls differently. Previous research suggests that girls and boys experience the formation of sexual identity (Savin-Williams and Diamond 2000) and the stigma attached to same-sex attraction (D'Augelli, Pilkington, and Hershberger 2002) differently. Moreover, different aspects of the school environment, as described above, may matter more or less for same-sex-attracted girls and boys. Though previous studies of sexual minority adolescents' experiences in schools suggest that sexual minority boys may be more affected by heteronormative school contexts (Pascoe 2007), exploring the effects of heteronormativity on same-sex-attracted rather than lesbian, gay, bisexual, and queer (LGBQ) identified youth may result in findings that diverge from previous research.

DATA AND METHOD

To examine how school culture affects the well-being of same-sex-attracted youth, we employed data from the National Longitudinal Study of Adolescent Health (Add Health) and its education component, the Adolescent Health and Academic Achievement Study (AHAA) (Muller et al. 2007). Add Health is a nationally representative, school-based study of seventh to twelfth grade students who were first interviewed during the 1994-95 school year. The Add Health sample of 20,745 students was drawn from a random sample of high schools in the United States that were stratified by region, urbanicity, size, type, racial composition, and grade span (Harris et al. 2003).

Add Health was the first nationally representative sample of youth that included any information on sexual attraction; therefore, it offered the

first opportunity to assess the degree and extent of problems faced by sexual minority adolescents nationwide. In addition, the Add Health and AHAA data include information on several domains of adolescents' lives, including socioemotional well-being, experiences with fighting, and academic outcomes. Add Health contains large within-school samples that allow us to measure different aspects of school culture by aggregating individual responses to questions about sports and religion. We limit our sample to high school students (grades 9 to 12) who completed both an in-school and an in-home (wave I) interview, had a valid sampling weight, and were not missing information on same-sex attraction ($n = 7,082$ girls and 6,861 boys). Descriptive statistics for all individual-level and school-level variables are presented in Table 1.

Measures

Romantic attraction. Our measure of same-sex attraction was based on questions from the wave I in-home survey that asked the respondent whether he or she had ever had a romantic attraction to a female and to a male. We considered youth to be same-sex attracted if they ever reported having been attracted to a person of the same sex, regardless of whether they also reported other-sex attractions. Students who reported that they had never been romantically attracted to a male or female were included in analyses as a separate category. Other-sex-attracted adolescents served as a reference group in all models.

Because sexuality is fundamentally in development during adolescence, we believe romantic attraction is a more developmentally appropriate measure of sexual orientation than sexual behaviors, relationships, or identity. In fact, research has found that sexual minority teenagers consider the desire to be romantically involved a more important aspect of sexual orientation than identity or behavior (Savin-Williams 2005). Many adolescents who experience same-sex desires will never identify as gay, lesbian, or bisexual (Savin-Williams 2005); therefore, our romantic attraction measure likely reveals both self-identified LGBTQ youths as well as those who do not, and may never, identify as such. A focus on same-sex attraction allows this study to explore the power of heteronormative contexts to constrain the sexual feelings and desires of all youth, not just those who identify as LGBTQ. We should be clear, however, that we do not know how many of these youth incorporated these attractions into their sexual identity, made their attractions known to their peers, or displayed any gender nonconformity in their behaviors or dress.

TABLE 1: Descriptive Statistics for All Analytic Variables

<i>Individual-level Variables</i>	<i>Girls (N = 7,082)</i>			<i>Boys (N = 6,861)</i>	
	<i>M or Proportion</i>	<i>SD</i>	<i>% Missing</i>	<i>M or Proportion</i>	<i>SD</i>
<i>Outcomes</i>					
Depression	0.66	0.40		0.55	0.33
Self-esteem	3.93	0.55		4.15	0.52
Fighting	0.21			0.42	
Course failure	0.44			0.57	
<i>Independent variables</i>					
<i>Romantic attraction</i>					
Other-sex attraction	0.87			0.83	
Same-sex attraction	0.06			0.07	
No attraction	0.08			0.10	
<i>Race/ethnicity</i>					
White	0.65			0.65	
Latino/a	0.11			0.12	
Black	0.16			0.15	
Asian	0.05			0.05	
Other	0.03			0.03	
Parents' education	2.78	1.12	2.13	2.79	1.14
Age	16.68	1.29		16.84	1.36
<i>Family structure</i>					
Single parent	0.23			0.22	
Stepparent	0.17			0.17	
Relationship with parents	3.42	0.58	2.73	3.50	0.50
<i>Pubertal development</i>					
Younger	0.19			0.21	
Older	0.41			0.40	
<hr/>					
<i>School-level Variables (n = 73)</i>	<i>M or Proportion</i>	<i>SD</i>		<i>Min</i>	<i>Max</i>
<hr/>					
<i>School size</i>					
Small	0.16				
Medium	0.37				
Large	0.47				
<i>School region</i>					
West	0.19				
Midwest	0.23				
South	0.38				
Northeast	0.19				
<i>Urbanicity</i>					
Urban	0.29				

(continued)

TABLE 1: (continued)

<i>School-level Variables (n = 73)</i>	<i>M or Proportion</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Rural	0.19			
Suburban	0.52			
School religiosity (unstandardized)	2.65	0.46	1.51	3.90
Prevalence of football (unstandardized)	0.39	0.16	0.00	0.78
Proportion sexual minority	0.06	0.03	0.01	0.14

SOURCE: National Longitudinal Study of Adolescent Health.

NOTE: Descriptive statistics for individual-level variables are weighted.

Dependent variables. *Depression* was assessed using 19 items from the Center for Epidemiological Studies Depression scale that measures both malaise and mood aspects of emotional distress. Responses to the items were averaged to form a single continuous indicator of depressive symptoms ($\alpha = .86$) that ranges from 0 to 3. *Self-esteem* is assessed with a single continuous indicator ranging from 1 (*strongly disagree*) to 5 (*strongly agree*); higher values represent higher levels of self-esteem ($\alpha = .85$). It is based on seven in-home survey questions assessing how strongly the respondent agrees or disagrees that he or she has a lot of good qualities, is physically fit, has a lot to be proud of, likes himself or herself the way he or she is, feels he or she is doing everything just about right, feels socially accepted, and feels loved and wanted. *Fighting* is a dichotomous measure indicating whether or not a student reported being in a physical fight in the past year. This question asks only whether the respondent “got into a physical fight”; we are unable to distinguish whether adolescents were physically victimized or if they initiated the fight (possibly in response to harassment). *Academic failure* is a dichotomous measure indicating whether or not a student ever failed any type of course in high school and is constructed using data taken from students’ high school transcripts.

School characteristics. *School religiosity* is an aggregation, at the school level, of individual religious attendance. During the in-home interview, students were asked how often they have, in the past year, attended religious services, and responses ranged from *never* to *once a week*. Responses were reverse coded so that higher values (1–4) represented more attendance and were then averaged within each school to produce a

measure describing the average religious attendance of students within the school. Individuals who reported no religious affiliation were given the lowest value (1) on the religious attendance measure. *Prevalence of football* was measured as the proportion of male students who participated in school football during the 1994-95 school year (limited to boys, as very few girls participated in football). This measure was based on a question from the in-school survey that asked students to identify school-organized clubs, organizations, and teams they participated in or planned to participate in during the current school year. Finally, *urban* refers to schools located within urban areas, with schools located in rural or suburban areas serving as the reference group. Information on school locale comes from the 1994-95 school administrator survey.

Control variables. We control factors related to adolescent problem behaviors, including family relationships (Steinberg 2001) and pubertal development (Siegel et al. 1999). *Relationship with parents* was measured with five questions (coded 0 to 4) that asked respondents about their relationships with each resident parent (mother and father). We constructed separate indicators for mother ($\alpha = .84$) and father ($\alpha = .88$) by taking the mean of the five responses and took the higher score. *Relative pubertal development* indicates whether the respondent described himself or herself as looking younger, older, or about average compared to other students his or her age. We also controlled for students' background characteristics, including racial/ethnic identity, age, parents' highest level of education, and family structure. Finally, we included school-level controls for school size (small, medium, or large) and region (South, West, Midwest, or Northeast), which were taken from the school administrator survey. We used mean imputation to fill in missing values for relationship with parents and parents' education, and in models we included dummy variables indicating values were missing.

Analytical Plan

We employed multilevel modeling using the HLM6 software to examine the impact of school- and individual-level variables on adolescents' social-emotional well-being and problem behaviors. First, we estimate the effect of same-sex attraction on depression, self-esteem, fighting, and academic failure, controlling for individual-level factors (model 1). To examine whether this relationship varies according to the culture of the school, we estimate a series of cross-level interactions between same-sex attraction and school characteristics: school religiosity (model 2), the

prevalence of football (model 3), and urban locale (model 4). All models include school-level controls for size and region (although coefficients are not shown in the table), and all analyses are performed separately for boys and girls. In our regression models, dichotomous variables are uncentered and ordinal and continuous variables are grand mean centered (individual values converted into deviations from the overall sample mean). The intercepts in these models can thus be interpreted as the average outcome for the hypothetical individual who is in the reference category for all dummy variables and average on all continuous variables. We include the student-level weight normalized at the individual level in all models.

RESULTS

Overall, our findings support previous literature suggesting that same-sex-attracted youth are at greater risk for lower social-emotional well-being and externalized signs of distress—fighting and failure. We find that this is especially the case for same-sex-attracted girls. We also find that our school culture variables representing heteronormativity, including school religiosity, the prevalence of football, and school locale, help to moderate this relationship. Below we present results from multilevel fixed-effects hierarchical linear models for boys and girls predicting depression, self-esteem, fighting, and failure.

Depression

As shown in model 1 of Table 2, both same-sex-attracted girls and same-sex-attracted boys report higher levels of depression compared to their other-sex-attracted peers, even after controlling for important socio-demographic background characteristics, parental relationships, and pubertal development. For girls, this relationship does not vary by the level of religious attendance within the school (model 2), the prevalence of football in the school (model 3), or school locale (model 4). However, for boys, the association between same-sex attraction and depression does vary by school locale. Results of model 4 suggest that, among boys, the negative effect of same-sex attraction on depression is weaker in urban schools than it is in rural and suburban schools, as shown by the statistically significant and negative cross-level interaction between same-sex attraction and urban school locale. In urban schools, the same-sex attraction effect is weaker (i.e., $b = .11 + -.11(1) = 0.0$) than it is in suburban and rural schools (i.e., $b = .11 + -.11(0) = .11$), suggesting that urban

TABLE 2: Results from Hierarchical Linear Models Predicting Depression for Girls and Boys

	<i>Girls</i>				<i>Boys</i>			
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>
Romantic attraction								
None	.01	.01	.01	.01	.04*	.04*	.04*	.04*
Same sex	.14***	.14***	.14***	.12***	.08***	.08***	.07***	.11***
Cross-level interactions								
Same-sex attraction by						.01		
School religiosity		-.02						
Prevalence of football			-.01				.03	
Urban School-level variables				.10				-.11*
School religiosity		.00				-.01		
Prevalence of football			.00				.00	
Urban locale				-.01				.02
Individual-level controls								
Age	.00	.00	.00	.00	.02***	.02***	.02***	.02***
Race (white)								
Black	.08***	.08***	.08***	.08***	.04*	.04*	.04*	.04
Latino	.07*	.06*	.07*	.07*	.06**	.06**	.06**	.06**
Asian	.09**	.09**	.09**	.09**	.08**	.08**	.08**	.08**
Other	.03	.03	.03	.03	.07	.07	.07	.07
Parents' education	-.03***	-.03***	-.03***	-.03***	-.02***	-.02***	-.02***	-.02***
Family structure (intact)								
Single parent	.03	.03	.03	.03	.02	.02	.02	.02
Stepparent	.04	.04	.04	.04	.04**	.04**	.04**	.04**
Relationship with parents	-.19***	-.19***	-.19***	-.19***	-.17***	-.17***	-.17***	-.17***
Pubertal development (average)								
Younger	.09***	.09***	.09***	.09***	.06***	.06***	.06***	.06***

(continued)

TABLE 2: (continued)

	<i>Girls</i>				<i>Boys</i>			
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>
Older	.07***	.07***	.07***	.07***	.01	.01	.01	.01
Intercept	.55***	.59***	.59***	.59***	.49***	.49***	.49***	.49***
<i>N</i>	7,082				6,860			

SOURCE: National Longitudinal Study of Adolescent Health.

NOTE: Models 2, 3, and 4 control for school size and region.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

schools may protect against depression among same-sex-attracted boys. Thus, same-sex-attracted boys attending schools in urban areas experience less social-emotional distress associated with the stigmatization of same-sex attraction, as seen by their lower rates of depressive symptoms, than those attending schools in suburban or rural areas.

Self-esteem

Table 3 presents similar results for self-esteem. For girls, the main effect of same-sex attraction in all models is negative and statistically significant, suggesting that same-sex-attracted girls have lower self-esteem in adolescence than their other-sex-attracted counterparts. However, this relationship does not vary by school religiosity (model 2), prevalence of football (model 3), or locale (model 4).

For boys, we see something different. As shown in model 1, there is not a statistically significant effect of same-sex attraction on self-esteem when variation in school culture is not considered. However, there is evidence that, for boys, the relationship between same-sex attraction and self-esteem is moderated by the prevalence of football within the school (model 3). The cross-level interaction between prevalence of football and same sex-attraction is negative and statistically significant, suggesting that the visibility of a hypermasculine sport such as football in schools may decrease levels of self-esteem for same-sex-attracted boys within these schools. Taken together, these results suggest that while the negative relationship between same-sex attraction and social-emotional well-being is, on average, stronger for girls than for boys, this relationship is more dependent on a football culture and urban locale for boys than it is for girls.

TABLE 3: Results from Hierarchical Linear Models Predicting Self-esteem for Girls and Boys

	<i>Girls</i>				<i>Boys</i>			
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>
Romantic attraction								
None	.02	.02	.02	.02	.00	.00	.00	.00
Same sex	-.12**	-.12**	-.12**	-.12*	-.03	-.03	-.01	-.03
Cross-level interactions								
Same-sex attraction by						-.01		
School religiosity		.01						
Prevalence of football			.01				-.11**	
Urban School-level variables				.00				.00
School religiosity		.01				.01		
Prevalence of football			.02				.02	
Urban locale				.06*				-.01
Individual-level controls								
Age	.01	.01	.01	.01	-.01	-.01	-.01	-.01
Race (white)								
Black	.09**	.09**	.09**	.09**	.12***	.12***	.12***	.13***
Latino	-.03	-.03	-.02	-.03	-.04	-.03	-.03	-.03
Asian	-.10*	-.09*	-.09*	-.10*	-.11**	-.10**	-.10**	-.10**
Other	.00	.00	.00	.00	-.09	-.09	-.08	-.09
Parents' education	.02**	.02**	.02**	.02**	.03***	.03***	.03***	.03***
Family structure (intact)								
Single parent	.03	.03	.03	.03	.04	.04	.04	.04
Stepparent	-.01	-.01	-.01	-.01	-.04	-.04	-.03	-.04
Relationship with parents	.39***	.39***	.39***	.39***	.39***	.39***	.39***	.39***
Pubertal development (average)								
Younger	-.01	-.01	-.01	-.01	-.03	-.03	-.03	-.03

(continued)

TABLE 3: (continued)

	<i>Girls</i>				<i>Boys</i>			
	<i>Model</i>	<i>Model</i>	<i>Model</i>	<i>Model</i>	<i>Model</i>	<i>Model</i>	<i>Model</i>	<i>Model</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>
Older	-.02	-.02	-.02	-.02	.05***	.05***	.05***	.05***
Intercept	3.94***	3.86***	3.85***	3.84***	4.13***	4.10***	4.10***	4.10***
<i>N</i>	7,080				6,860			

SOURCE: National Longitudinal Study of Adolescent Health.

NOTE: Models 2, 3, and 4 control for school size and region.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Fighting

Models predicting involvement in fights are shown in Table 4. For girls, we do see a main effect of same-sex attraction on fighting, such that, as shown in model 1, same-sex-attracted girls are 65 percent (odds ratio [OR] = $\exp(.50) = 1.65$) more likely than other-sex-attracted girls to have been in a physical fight in the past year. In addition, we see that this effect varies by the average religiosity of the school, as shown by the significant and positive cross-level interaction between same-sex attraction and school religiosity (model 2). In schools with average religious attendance one standard deviation above the mean, same-sex-attracted girls are more likely to have been in a fight than are those in schools with average religious attendance one standard deviation below the mean ($b = .55 + .38(1.0) = .93$ vs. $b = .55 + .38(-1.0) = .17$).

For boys, experiencing same-sex attraction, on average, does not seem to increase the odds of getting into a fight. However, while the main effect of same-sex attraction on fighting is not statistically significant, the cross-level interaction between urban school locale and same-sex attraction is negative and statistically significant (model 4); this suggests that same-sex-attracted boys may be less likely to get into physical fights in urban schools than they are in rural or suburban schools. In fact, in urban schools, same-sex-attracted boys are less likely than their other-sex-attracted peers to have been in a fight ($b = .09 + -.75(1) = -.66$).

Academic Failure

Finally, results for analysis of course failure are presented in Table 5. For girls, we see that the effect of same-sex attraction on the likelihood of

TABLE 4: Results from Hierarchical Linear Models Predicting Fighting for Girls and Boys

	<i>Girls</i>				<i>Boys</i>			
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>
Romantic attraction								
None	-.19	-.19	-.19	-.19	-.61***	-.61***	-.61***	-.61***
Same sex	.50**	.55**	.49**	.43*	-.10	-.09	-.09	.09
Cross-level interactions								
Same-sex attraction by						.10		
School religiosity		.38*						
Prevalence of football			-.01				-.06	
Urban				.26				-.75*
School-level variables								
School religiosity		-.09				-.12*		
Prevalence of football			.00				.03	
Urban locale				.03				.24*
Individual-level controls								
Age	-.10***	-.10***	-.10***	-.10***	-.06*	-.06*	-.06*	-.06*
Race (white)								
Black	.65***	.70***	.69***	.68***	.38***	.39***	.37***	.37***
Latino	.34*	.32*	.32	.31	.13	.13	.13	.11
Asian	.05	.02	.03	.03	-.13	-.12	-.13	-.13
Other	.12	.10	.10	.10	.23	.20	.21	.20
Parents' education	-.16***	-.17***	-.17***	-.17***	-.12***	-.11***	-.12***	-.12***
Family structure (intact)								
Single parent	.39***	.38***	.38***	.39***	.18*	.18*	.18*	.18*
Stepparent	.29*	.29*	.29*	.29*	.13	.13	.13	.13
Relationship with parents	-.40***	-.40***	-.40***	-.40***	-.20**	-.20**	-.20**	-.20**
Pubertal development (average)								

(continued)

TABLE 4: (continued)

	<i>Girls</i>				<i>Boys</i>			
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>
Younger	.21	.21	.22	.22	-.10	-.10	-.10	-.10
Older	.41***	.40***	.41***	.41***	.19*	.19*	.19*	.20*
Intercept	-1.98***	-2.03***	-2.01***	-2.00***	-.48***	-.62***	-.56***	-.61***
<i>N</i>	7,072				6,844			

SOURCE: National Longitudinal Study of Adolescent Health.

NOTE: Models 2, 3, and 4 control for school size and region.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

failure varies by school religiosity (model 2) and the prevalence of football (model 3). Same-sex-attracted girls are more likely to fail a course in high school when they are located within a more religious context ($b = .44 + .70(1.0) = 1.14$ vs. $b = .44 + .70(-1.0) = -.26$) and in schools with a larger football culture ($b = .31 + .38(1.0) = .69$ vs. $b = .31 + .38(-1.0) = -.07$). For girls, this finding is consistent with the finding for fighting, which suggests an important association between school culture and externalizing behaviors for same-sex-attracted girls in high schools.

Same-sex-attracted boys are more likely than other-sex-attracted boys to fail at least one course in high school. Specifically, as seen in model 1, same-sex-attracted boys are 60 percent ($OR = \exp(.47) = 1.60$) more likely to fail a course in high school than are other-sex-attracted boys. As with findings for depression and fighting, the effect of same-sex attraction for boys appears to vary by school locale (model 4). In urban schools, the same-sex attraction effect is much weaker (i.e., $b = .67 + -.73(1) = -.06$) than it is in suburban and rural schools (i.e., $b = .67 + -.73(0) = .67$).

DISCUSSION

Our study demonstrates that school culture shapes the well-being of same-sex-attracted youth. While previous research has demonstrated that sexual minority youth are at greater risk for experiencing depressive symptoms (D'Augelli 2002), low self-esteem (D'Augelli 1998), physical conflict with peers (D'Augelli, Pilkington, and Hershberger 2002), and poor academic performance (Pearson, Muller, and Wilkinson 2007), our study suggests that these risks may depend in part on the level of heteronormativity

TABLE 5: Results from Hierarchical Linear Models Predicting Failure for Girls and Boys

	<i>Girls</i>				<i>Boys</i>			
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>
Romantic attraction								
None	.26	.27	.26	.26	.20	.20	.20	.20
Same sex	.33	.44*	.31	.17	.47**	.47**	.50**	.67**
Cross-level interactions								
Same-sex attraction by						-.02		
School religiosity		.70*						
Prevalence of football			.38*				-.20	
Urban School-level variables				.74				-.73*
School religiosity		-.10				-.16		
Prevalence of football			-.08				-.11	
Urban locale				.40				.36
Individual-level controls								
Age	-.01	-.01	-.01	-.01	.00	.00	.00	.00
Race (white)								
Black	.65***	.65***	.65***	.65***	.53*	.53*	.53*	.52*
Latino	.50**	.46**	.46**	.46**	.18	.15	.16	.14
Asian	-.61	-.62	-.62	-.62	-.25	-.27	-.27	-.28
Other	.39	.39	.38	.40	.74	.74	.77	.74
Parents' education	-.36***	-.36***	-.36***	-.36***	-.41***	-.41***	-.41***	-.41***
Family structure (intact)								
Single parent	.58***	.58***	.57***	.58***	.31*	.30*	.31*	.30*
Stepparent	.46***	.46***	.46***	.46***	.50***	.49***	.50***	.49***
Relationship with parents	-.15	-.14	-.15	-.15	-.24*	-.24*	-.24*	-.24*
Pubertal development (average)								

(continued)

TABLE 5: (continued)

	<i>Girls</i>				<i>Boys</i>			
	<i>Model</i>	<i>Model</i>	<i>Model</i>	<i>Model</i>	<i>Model</i>	<i>Model</i>	<i>Model</i>	<i>Model</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>	<i>Coeff.</i>
Younger	-.06	-.07	-.06	-.06	.01	.01	.01	.01
Older	.22*	.22*	.22*	.23*	.12	.12	.12	.12
Intercept	-.74***	-1.33***	-1.30***	-1.33***	.08	-.27	-.20	-.23
<i>N</i>	4,419				4,092			

SOURCE: National Longitudinal Study of Adolescent Health.

NOTE: Models 2, 3, and 4 control for school size and region.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

found within the schools they attend. Specifically, the visibility of football and religion as well as the location of the school in an urban, suburban, or rural community influence the degree to which same-sex-attracted youth experience decreased well-being. Moreover, these different aspects of school culture appear to influence same-sex-attracted boys and girls differently: While the prevalence of football within schools affects the well-being of both girls and boys with same-sex attractions, school religiosity appears to play a greater negative moderating role for same-sex-attracted girls, while school locale, with urban settings exhibiting more tolerance, plays a greater role for same-sex-attracted boys.

The visibility of football within the school appears to negatively affect both boys and girls to some extent: Compared to their peers with only other-sex attractions, same-sex-attracted boys report lower levels of self-esteem and same-sex-attracted girls are more likely to fail a course when attending schools where more boys are involved in school-sponsored football. Research suggests that the heteronormative practices and discourses employed by adolescents who participate in football may reinforce hierarchies of masculinity and sexuality and stigmatize non-normative sexual desires. In addition, school sponsorship may have the power to legitimate patterns of discourse and behavior that create feelings of difference. Our findings provide some evidence that there is greater stigma attached to nonheterosexual feelings and behaviors in schools where football is more visible, for both boys and girls. While we expected that the prevalence of football in schools might negatively affect the well-being of same-sex-attracted boys more than same-sex-attracted girls because of football's emphasis on the performance of hegemonic

masculinity, our results do not support this. It is possible that if we had focused on LGBQ identity or gender nonconformity rather than same-sex attraction, our findings might have been stronger for boys, who might be more targeted by peers in these contexts. However, the symbolic rituals associated with high school football reinforce compulsory heterosexuality for both boys and girls, so same-sex-attracted girls and boys may be equally affected by the visibility of football in school.

Findings regarding the impact of religiosity within the school suggest that religion has a unique impact on the well-being of same-sex-attracted girls. While same-sex-attracted girls are more likely than other-sex-attracted girls to be involved in fights and to fail a course in schools with more religious student bodies, same-sex-attracted boys are not affected by the religiosity of the schools they attend. Perhaps this is because of the greater policing of women's sexual desires and behaviors compared to men in many religious institutions. While same-sex relationships of both men and women have been targeted by conservative religious organizations, women and girls have often been the focus of discourses of sexual morality (Heath 2009; Weeks 1985). Coupled with the greater importance that girls place on religion (Miller and Hoffman 1995; Rostosky et al. 2004), it is not surprising that the visibility of religion in school may play a greater role in the well-being of same-sex-attracted girls. The apparent impact of levels of religiosity among students within schools suggests a powerful influence of institutionalized religion and its ability to pervade secular institutions. This is particularly important given that institutionalized religion has been, today and in the past, one of the largest voices against same-sex relationships. Its impact at the school level suggests how ubiquitous and potentially harmful these cultural messages can be for young people.

For the last school culture measure we investigated—urban locale—we again found differences between boys and girls. For boys, but not for girls, attending a school in an urban versus suburban or rural area appears to buffer the negative effect of same-sex attraction on depression, fighting, and failing a course in high school. Individuals from rural areas often report more negative feelings toward homosexuality and higher levels of heteronormativity, and the findings of this study reinforce previous findings that sexual diversity is often less tolerated and more stigmatized in nonurban contexts and the schools within them (Stein 2001). In addition, the mere visibility of alternative forms of sexuality often found in urban areas may lessen the stigma and associated feelings of isolation and difference experienced by adolescents with same-sex attractions (Flowers and Buston 2001). Same-sex-attracted youth in nonurban areas may feel

excluded not only from the heterosexual culture within their own immediate community but also from an inaccessible gay subculture that exists in urban areas (Flowers and Buston 2001). The greater visibility of this gay male culture in many urban areas, relative to the decline of visible lesbian subcultures (Stein 2006), may help explain the finding of a moderating effect of urban location for boys but not for girls.

It is important to acknowledge the implications of our use of same-sex attraction as a measure of sexual minority as well as how this measure fits into our larger theoretical framework of understanding how heteronormativity within schools shapes the development of youth. Much of the research on heteronormativity within schools deals with the verbal and physical harassment aimed at gender transgressions or nonheterosexual identities (Savin-Williams 2005). By using same-sex attraction as a measure, we are tapping a sense of difference and stigma that is more closely tied to sexuality. While gender and sexuality are tightly intersecting statuses, recent advances in the sociology of sexualities and queer theory call for a separate examination of sexuality, one that acknowledges sexuality as an organizing principle of power that affects everyone and that avoids the pitfalls of defining sexuality “almost exclusively in relation to a discrete orientation or identity category” (Stein 2008, 116). More work in the sociology of sexuality needs to address, more broadly, how and in what contexts varieties of adolescent sexual attractions and desires become stigmatizing.

Previous research has suggested how heteronormativity is produced within schools and some potential interventions to reduce it (Chesir-Teran 2003). Much of this work has focused on specific programs designed to meet the needs of LGBQ youth, such as gay–straight alliances and safe school policies (Kosciw, Diaz, and Greytak 2007). While important, such interventions may ignore the subtle yet powerful maintenance of heteronormativity within schools that occurs through the reproduction of schemas and daily practices organized around heterosexual relationships, which are further legitimated by the school and by institutions embedded within the school, such as sports and religion. We suggest thinking beyond interventions specifically aimed at LGBQ-identified students that are based on assumptions about identities and that ignore a larger population of youth who may feel stigmatized by dominant forms of sexuality.

Qualitative comparisons of schools may be needed to fully understand why school locale and the prevalence of football and religion are associated with the marginalization of students with same-sex attraction and to uncover other mechanisms that reproduce heteronormativity within

schools. More work should be done to explore the relational contexts of other spaces within schools, such as drama and fine arts programs, to determine the dominant discourses and practices that pervade these spaces and their possible role in reducing the stigma of same-sex attraction. By exploring how the local school context shapes the well-being of same-sex-attracted adolescents, we can reveal ways schools can help protect all youth from negative outcomes related to heteronormative cultures. Moreover, we may be able to inhibit the reproduction of inequalities, including those related to gender and sexuality, which often occurs through the construction and reconstruction of heteronormative culture through everyday interactions and the legitimization of these interactions within schools.

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