



Parent Support Matters for the Educational Success of Sexual Minorities

Ryan J. Watson, Melissa A. Barnett & Stephen T. Russell

To cite this article: Ryan J. Watson, Melissa A. Barnett & Stephen T. Russell (2016) Parent Support Matters for the Educational Success of Sexual Minorities, *Journal of GLBT Family Studies*, 12:2, 188-202, DOI: [10.1080/1550428X.2015.1028694](https://doi.org/10.1080/1550428X.2015.1028694)

To link to this article: <http://dx.doi.org/10.1080/1550428X.2015.1028694>



Published online: 15 Sep 2015.



Submit your article to this journal [↗](#)



Article views: 58



View related articles [↗](#)



View Crossmark data [↗](#)

Parent Support Matters for the Educational Success of Sexual Minorities

Ryan J. Watson^a, Melissa A. Barnett^b and Stephen T. Russell^b

^aSchool of Nursing, University of British Columbia, Vancouver, British Columbia, Canada;

^bNorton School of Family and Consumer Sciences, University of Arizona, Tucson, AZ

ABSTRACT

Recent research has documented disparities in academic experiences and achievement for sexual minorities. Two important correlates of well-being for all youths are their relationships with family members and experiences at schools. We used nationally representative data to investigate whether the association between perceived maternal and parental support (defined as warm, firm, and accepting parental bonds) and educational outcomes differs for sexual minority compared to heterosexual youths. The sample consisted of 12,064 participants. Results indicated that parent support was significantly associated with grade point average (GPA), school belonging, and school troubles for both sexual minority and heterosexual participants, but the magnitudes differed. In addition, we found a two-way interaction between sexual minority status and parental support in association with school belonging, indicating that for sexual minority youths, low parental support was associated with particularly low levels of school belonging compared to heterosexual youths. This project highlights the importance of family support as a contributor for healthy development.

KEYWORDS

GLBT family; educational achievement; school belonging; parent support

Introduction

It is well demonstrated from studies spanning three decades that sexual minority (i.e., gay, lesbian, and bisexual [GLB]; non-heterosexual) youths are at higher risk for compromised school outcomes compared to their heterosexual counterparts.¹ For example, sexual minorities report high rates of victimization, hearing biased remarks based on their sexual status, and feeling unsafe at school (Russell, Ryan, Toomey, Diaz, & Sanchez, 2011). In turn, those who have reported these events at school also reported high rates of absenteeism and low educational achievement and aspirations (Kosciw, Greytak, Diaz, Bartkiewicz, Boesen, & Palmer, 2012). Other research suggests that sexual minorities, especially boys, struggle

CONTACT Ryan J. Watson  ryan.watson@ubc.ca  School of Nursing, University of British Columbia, T222-2211 Wesbrook Mall, Vancouver, B.C. V6T 2B5, Canada

© 2016 Taylor & Francis Group, LLC

academically compared to their heterosexual counterparts (Pearson, Muller, & Wilkinson, 2007). Contemporary research has also implicated parent-adolescent relationships as important for sexual minorities (Ryan, Huebner, Diaz, & Sanchez, 2009; Toomey, Ryan, Diaz, Card, & Russell, 2010). However, despite the common assertion that parents play an integral role in the development of their child's health and well-being, there is surprisingly little empirical research on the role of parent support as an influence on school success for sexual minority youths.

In this article, we consider whether parent support has a stronger impact on educational outcomes for sexual minorities (operationalized as same-sex-attracted youths [SSAY]) compared to their heterosexual counterparts: Are relationships with parents especially important for a minority group that is typically highly stigmatized? Previous research has found that parent relationships are more strongly associated with positive mental health and reduced risk behavior for sexual minorities compared to heterosexuals (Pearson & Wilkinson, 2013). This study extends these findings: Do parents play a distinct role with respect to educational outcomes for sexual minority youths? Given that high-quality family relations have been shown by previous research to be directly linked to better emotional and mental health for sexual minority youths (e.g., Ryan et al., 2009), and that sexual minority youths face unique challenges at school due to reactions to their sexual orientation (Kosciw, Greytak, & Diaz, 2009), positive parental support may be particularly important for school success for sexual minorities. We expect these previous findings that focus on sexual identity extend to SSAY—same-sex attraction may lead to lower levels of perceived parental support even if the parents aren't necessarily aware of this attraction.

Importance of parent support

Family members provide a framework for adjustment, learning, and development; they are essential socialization agents for all young people. In his review on parent-adolescent relationships, Steinberg (2001) concluded that adolescents benefit most from warm, firm, and accepting parenting behaviors. To disentangle these “good parenting behaviors,” other research (Rohner, 2010) has implicated acceptance and rejection as qualities that define the warmth dimension of interpersonal relationships (Rohner, 2010). For example, Rohner, Khaleque, and Cournoyer (2005) found that youths across the world need support (i.e., warmth and love) from their parents; youths report psychological maladjustment if warmth and love are not adequately provided. Based on the extant literature that suggests warmth and care are essential in parent-adolescent relationships, we chose measures that assess these dimensions of parenting to understand how these relationships are associated with academic outcomes for sexual minorities.

The parental bond is expected to be constructive and loving for most heterosexual youths, but sexual minority youths may face a different reality (Savin-Williams, 2003). Relations with family members have important implications for the well-

being of sexual minorities: For example, family rejection on the basis of sexual orientation has been found to be associated with a number of risks, including poorer physical (Ryan, Russell, Huebner, Diaz, & Sanchez, 2010) and mental health (Hegna & Wichstrøm, 2007; Needham & Austin, 2010) outcomes. In addition, more victimization from family members and peers has been reported by sexual minority youths compared to their heterosexual counterparts. Specifically, parents' suspicions of their children's sexual orientation have been associated with parent victimization (D'Augelli, Hershberger, & Pilkington, 1998). Using a nationally representative sample, Pearson and Wilkinson (2013) found that low levels of parent warmth and closeness explained higher rates of depression and risk factors for sexual minorities. In addition, same-sex-attracted relative to other-sex-attracted youths (especially girls) had experienced these compromised outcomes because they perceived less supportive relationships with their parents.

On the other hand, parent warmth and acceptance has been found to be protective in a number of different ways for sexual minority youths (Doty, Willoughby, Lindahl, & Malik, 2010; McDowell & Serovich, 2007; Ryan et al., 2009). A contemporary project examined how parent acceptance served as a protective factor for health in sexual minority adolescents. In a study of 245 GLBT (gay, lesbian, bisexual, and transgender) young adults (The Family Acceptance Project), mental and emotional health were negatively impacted by rejecting family behaviors during adolescence; in young adulthood, those with rejecting parents were eight times more likely to report having attempted suicide, six times more likely to report high levels of depression, and were more likely to abuse drugs and engage in unsafe sex (Ryan et al., 2009). Using the same data, another study found strong associations between parental acceptance during adolescence and positive self-esteem and social support (Ryan et al., 2010).

Collectively, this research elucidates a need for scholars and clinicians to focus on the dynamics of parent warmth, care, and acceptance for sexual minority youth development. In addition, SSAY may need more parent support due to school and peer risks which may be compounded with less support from parents due to rejection based on sexual orientation.

School achievement

In combination with families, school experiences and achievement also play a prime role in the socialization of adolescents. Previous research on academic success for sexual minorities has focused on achievement and school belonging. For example, Pearson and colleagues (2007) found that sexual minority adolescents felt less integrated and connected at school, and they reported lower grade point averages (GPAs) than their heterosexual peers. Other research has focused on high school dropout rates. Although there is no consensus on dropout rates for GLBT youths, those youths who do drop out report unsafe school climates as the main reason for dropping out; in addition, more than 60% of GLBT students report

feeling unsafe at school because of their sexual orientation (Kosciw et al., 2009). While the majority of sexual minority youths do not report feeling safe at school, when safer school environments are reported, these youths also report better grades, fewer discipline problems, and more school engagement compared to those sexual minorities reporting feeling unsafe (Murdock & Bolch, 2005). This study extends these findings to inquire about how parent warmth is associated with academic success, belonging, troubles, and aspirations for sexual minorities. We focus on these measures because previous literature (e.g., Pearson et al., 2007) has found disparities for sexual minorities in respect to these outcomes.

Parent support as protective for school success

Parents' relationships with their children are expected to provide essential foundations for academic success (Resnick et al., 1997). It has been well-established in the scientific literature that parenting practices are linked to children's educational outcomes and achievement. One early study by Steinberg, Elmen, and Mounts (1989) examined 120 adolescent-parent relationships and found that authoritative parenting (characterized by high levels of psychological control, warmth, and behavior control) facilitated positive academic outcomes. The authors found that the specific dimensions of control associated with authoritative parenting (more warmth and encouragement) were linked to better academic outcomes than authoritarian and permissive parenting. In addition, family interactions and child aggression are associated with adult educational outcomes (Dubow, Boxer, & Huesmann, 2009). Specifically, Dubow and colleagues (2009) found that negative family interactions had indirect (through educational attainment and aspirations at age 19) and direct effects on later life educational attainment. Another study of 422 adolescent-parent relationships found that less parent control was associated with fewer adolescent externalizing problems, which included performance at school (Stice & Barrera, 1995).

While there is a strong research base directly linking parenting and school success in the general youth population, no research to date has linked parenting practices to educational outcomes and trajectories by focusing explicitly on sexual minority youths. Given the multitude of risks at school encountered by sexual minority youths, parent warmth and care may be particularly promotive of positive academic outcomes among this group of adolescents. It is true that decades of studies linking parenting to educational outcomes have included sexual minorities in their samples; yet, the experiences of sexual minorities are not captured without treating sexual orientation as a potential effect modifier. For example, one study focused on outcomes for sexual minorities in comparison to heterosexuals and found that parent support moderated the effects of homophobic bullying on suicidality for straight youths, whereas it did not for sexual minority youths (Poteat, Mereish, DiGiovanni, & Koenig, 2011). This study extends previous findings that implicate parents as essential to educational achievement for heterosexual youths

to understand the interplay between parent-adolescent relationships and academic outcomes for both sexual majority and minority youths.

Current study

This study considers how parenting support is associated with (and thus protective for) three different indicators of school outcomes (GPA, school belonging, and school troubles) for sexual minorities and heterosexual youths in a nationally representative data set. Using The National Longitudinal Study of Adolescent to Adult Health (Add Health), scholars have previously examined associations between perceptions of parental quality and mental health outcomes (Needham & Austin, 2010), self-reported performance in school (Pearson et al., 2007), suicide risk (Russell & Joyner, 2001), and occupational attainment (Ueno, Peña-Talamantes, & Roach, 2013) for sexual minorities. However, the possible links between high-quality parent-adolescent relationships and adolescent educational success (e.g., grades, school belonging) remain unexplored.

In particular, we pose two research questions: (a) Is there is a main effect of parent support on school outcomes for all young participants, such that higher parent support is protective for academic success, and (b) Do the associations between parent support and school outcomes differ across SSAY and other-sex-attracted youths (OSAY)? We expect that parent support will be more strongly associated with academic experiences and outcomes for sexual minorities based on previous literature that has implicated positive parental relations as imperative for healthier outcomes for these youths.

Method

Participants

The Add Health Study began in 1994 and is one of the most comprehensive surveys of adolescents in the United States. The original in-home survey included 20,745 adolescents in grades 7 through 12. All items in the present study come from Waves I and II, are weighted using the Wave II weighting variable, and represent a subset of the extant data. Wave I began when students were between 14 and 18 years of age, and Wave II was conducted one year after wave I. Romantic attractions and parent support are assessed at Wave I; academic outcomes are assessed at Wave II. All measures were reported by the adolescent.

The first wave of Add Health was conducted in 1994. Although societal views of same-sex attraction have changed dramatically since this study began, the fundamental and universal effects of parenting that shape adjustment for youths—including sexual minorities—have likely remained unchanged since this time. While social media, same-sex marriage rights, and the changing role of school-based supports have ameliorated the experiences of sexual minorities since 1994, we do not expect that the parent-child relationship and its effects on development

is fundamentally altered with these societal advancements. We illustrate the timelessness of the parent-child relationship with a classic example: In 1994, Rand Conger and Glen Elder wrote that throughout the 1980s in the United States, family conflict and turmoil increased the risk of adjustment problems for adolescents. The authors noted that the changes in social institutions and societal attitudes were found to attenuate adjustment problems for adolescents, but the parent relationships with their children were not intrinsically altered by societal changes. Thus, we argue that changing societal patterns do not change family dynamics, at least not in a way that would invalidate the relation of parental support on academic outcomes for sexual minorities.

Furthermore, this data set is the largest U.S. sample that is nationally representative and includes measures that allow for identification of sexual minority youths (see Harris et al., 2009, for an overview of Add Health). We consider the interpretations of our results for contemporary youths in the discussion.

Measures

Romantic attractions

Two items asked participants about their attractions at Wave I: (a) Have you ever had a romantic attraction to a male? and (b) Have you ever had a romantic attraction to a female? Two groups were created: those that reported romantic attractions to the other sex were classified as OSAY, whereas those that reported attraction to the same sex were classified as SSAY (Russell & Consolacion, 2003). For our analyses we created a dichotomized variable that included participants reporting only other-sex attraction (OSA; coded as 0; $N = 10,785$) and combined participants that reported exclusively same-sex attractions and participants that reported attractions to both sexes (coded as 1; $N = 1,279$).

Demographics

All demographic variables are measured at Wave I. Participants reported their race/ethnicity by choosing White, Latino, African-American, Asian, or Native American (0 = not checked, 1 = checked), and their biological sex (male = 1, female = 2). Age was calculated by use of the reported birth year. Parent education was measured by one item that asked "How far in school did your mother/father go?" Responses ranged from eighth grade or less (1) to professional training beyond a four-year college or university (9). Scores for mother and father were combined and averaged. Higher scores represent higher educational attainment.

For the SSAY, the average age for males ($N = 723$) was 15.83 ($SD = 1.74$), and slightly fewer than half identified as White (47.9%); 19.9% of the SSAY males identified as Hispanic, 23.8% identified as African-American, 1.9% as Native American, and 6.5% as Asian. For the SSAY females ($N = 556$), the average age was 16.04 ($SD = 1.68$) and about half (49.4%) identified as White, 21% identified as Hispanic,

20.1% as African-American, 3.3% as Native American, and 6.2% as Asian. Sample demographic characteristics did not differ for heterosexual participants.

Parent support

The parental support scale is a mean score of 10 items measured at Wave I. Five of these items asked about warmth from mothers and the other five from fathers. Items included “How close do you feel to your mother (father)?,” “How much does your mother (father) care about you?,” “Is your mother (father) warm and loving to you most of the time?,” “Are you satisfied with the way you communicate with your mother (father)?,” and “Are you satisfied with your relationship with your mother (father)?” Response options ranged from 1 (strongly disagree) to 5 (strongly agree). All 10 items were averaged to obtain an overall parent support score (1 = no support, 5 = most support; mother $\alpha = .87$, father $\alpha = .81$, overall $\alpha = .84$; Crockett, Veed, & Russell, 2010). Preliminary analyses indicated that when tested separately there were no differences between mother and father support scores and academic outcomes. When only data for one parent was available ($N = 65$), the measure for parent support was calculated by the average of the five items for the one parent.

Self-reported grades

Self-reported grades were assessed at Wave II using four different items: self-reported grades of science, English, history/social studies, and mathematics. These four subjects were combined and averaged to produce an overall GPA (based on a 4-point scale, 4 = A, $\alpha = .98$; Pearson et al., 2007; Russell, Seif, & Truong, 2001). Transcript grade data was only available for a fraction of both the sexual minority and heterosexual participants, and there was not sufficient power to warrant the use of these data.

School belonging

School belonging was assessed at Wave II. The school belonging scale was a mean score of three items pertaining to the 1995 school year: “feel close to people at school,” “feel part of school,” and “happy to be at school” (0 = never, 4 = every day; $\alpha = .77$; Russell et al., 2001).

School troubles

School troubles were assessed at Wave II. The school troubles scale was a mean score of three items pertaining to the 1995 school year: “getting along with other students,” “paying attention,” and “getting homework done” (0 = never, 4 = every day; $\alpha = .64$; Russell et al., 2001). Items were reverse scored so that higher scores indicated more school troubles.

Plan of analysis

Data were analyzed for missing values and outliers, and to ensure normal distributions. There were no outliers present in the data, and distributions were fairly normal. Missing data ranged from 2.5% to 24% on study variables, thus the multiple imputation procedure was used in SAS 9.2 to create 10 imputed data sets that were then combined once analyses were conducted (see Schlomer, Bauman, & Card, 2010, for an explanation of multiple imputation).

Survey regression using SAS 9.2 was performed to test whether parent support was associated with grades, school belonging, and school troubles for both SSAY and OSAY. This regression approach was used to adjust for the Add Health study’s complex sample design and weights (for more information about survey regression, see DuMouchel & Duncan, 1983). Three different models with identical predictors were tested with GPA, school belonging, and school troubles included as separate dependent variables using survey regression. We also included terms representing interactions between sexual minority status and standardized parent support in each of the models. Statistically significant interactions were interpreted using standard pick-a-point procedures (e.g., Aiken & West, 1991; Preacher, Curran, & Bauer, 2006), such that the simple slopes describing the associations between parent support and the academic outcome dependent variable for SSAY and OSAY were evaluated.

Results

Correlational analyses

Prior to conducting regression analyses to test the hypothesis, we considered whether the patterns of associations among variables varied for OSAY and SSAY. Table 1 presents correlations for both OSAY and SSAY on study variables. As shown in Table 1, when OSAY and SSAY reported higher parental support they also reported greater school belonging and fewer school troubles. When OSAY, but not SSAY, reported higher parent support, they also reported greater GPAs. A Fisher r-to-z transforma-

Table 1. Bivariate correlations and descriptives of independent and dependent variables.

	Other-Sex Attracted Youth				Same-Sex Attracted Youth			
	Parent Support	Grades	Belonging	Troubles	Parent Support	Grades	Belonging	Troubles
1. Parent Support								
2. Self-reported Grades	.09** ^a				.01a			
3. School Belonging	.26** ^a	.15** ^a			.30** ^a	0.07		
4. School Troubles	-.21**	-.23**	-.30** ^a		-.19**	-.17**	-.35** ^a	
Mean	21.58*	2.75*	11.21**	3.31**	21.05	2.57	10.71	3.81
Standard Deviation	3.18	0.84	2.62	2.35	3.54	0.86	2.86	2.57

Note. * $p < .05$. ** $p < .01$.

^aIndicates that the correlation significantly differs between the OSAY and SSAY groups at $p < .05$. OSAY and SSAY means are compared and significance is designated by the aforementioned significance criteria.

tion identified that the correlations between parent support and GPA, school belonging, and school troubles significantly differed for OSAY compared to SSAY, such that these associations were stronger for OSAY than SSAY. In addition, the positive correlations between GPA and school belonging differed significantly across groups, such that parents were more strongly associated with better grades for OSAY but more strongly associated with more school belonging for SSAY. These different patterns of bivariate correlations underscore the need to examine the processes linking family support and academic outcomes for SSAY and OSAY in a multivariate framework.

Survey regression models predicting academic outcomes

Survey regression models were computed to test predictors of educational outcomes. As shown in Table 2, controlling for the covariates, parent support was associated with higher GPAs ($B = .03$, $p < .001$), more school belonging ($B = .22$, $p < .001$), and fewer school troubles ($B = -.20$, $p < .001$) for the entire sample of participants. Thus, parent support was moderately associated with more school belonging and fewer school troubles, and weakly associated with higher GPAs. Compared to OSAY, SSAY reported more school troubles, less school belonging, lower GPAs, and less parent support.

Interaction effect

We also tested whether there was an interaction between parental support and sexual minority status in the prediction of the three educational outcomes. Across the three models, one statistically significant interaction emerged: The association between parent support and school belonging was qualified by a statistically significant interaction between parent support and sexual minority status ($b = .08$, $p < .05$). The interaction was evaluated by plotting the simple slopes of the lines defining the association between parent support and school belonging for OSAY and

Table 2. Survey regression models: academic outcomes.

Variable	Self-Reported Grades			School Belonging			School Troubles		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
<i>Biological Sex</i>	0.26	0.23	0.16***	0.08	0.07	0.01	-0.63	0.07	-0.12***
<i>Age</i>	-0.01	0.01	-0.01	-0.10	0.02	-0.05***	0.02	0.02	-0.02
<i>Parent Education</i>	0.07	0.01	0.20***	0.05	0.01	0.04***	-0.02	0.01	0.00
<i>Race (ref = White)</i>									
Latino	-0.19	0.06	-0.08**	0.13	0.11	0.02	-0.16	0.14	-0.06
African-American	-0.32	0.04	-0.13***	-0.11	0.12	-0.02	-0.30	0.09	-0.05
Asian	0.20	0.07	0.04**	0.33	0.20	0.04	-0.36	0.17	-0.03*
Native American	-0.24	0.10	-0.04*	-0.84	0.31	-0.02**	0.55	0.26	0.03*
<i>Sexual Minority</i>	-0.18	0.05	-0.03**	-0.42	0.13	0.25**	0.59	0.14	0.04***
<i>Parent Support</i>	0.03	0.00	0.10***	0.22	0.01	-0.04***	-0.20	0.01	-0.23***
<i>Sexual Minority x Parent Support</i>	-0.02	0.04	-0.02	0.08	0.04	0.01*	0.00	0.05	0.01

Note. Race/ethnicity (dichotomous controls for Hispanic, Asian, Native American, and African-American; White as reference category), parental education, gender, and age have been controlled for.

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

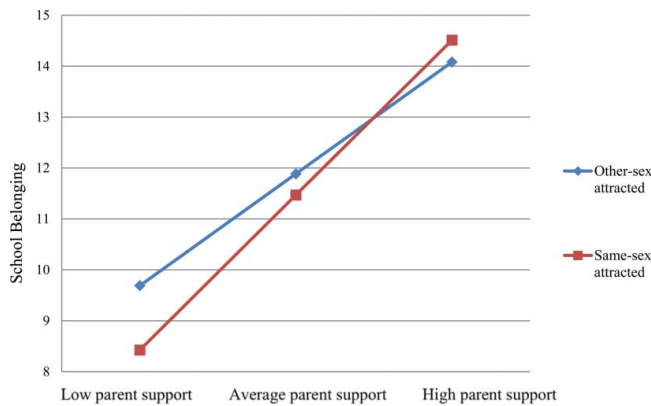


Figure 1. Parent support by sexual attraction interaction predicting school belonging.

SSAY. As shown in Figure 1, for both SSAY, ($b = .30, p < .001$) and OSAY ($b = .22, p < .001$), reporting higher levels of parental support was associated with higher levels of school belonging. However, the magnitude of this effect of parental support was stronger for SSAY than OSAY. Specifically, at high levels of parental support, SSAY and OSAY reported equivalent levels of school belonging, but at lower levels of parental support SSAY reported significantly lower school belonging than OSAY.

Discussion

Numerous studies have shown that parent relationships are especially relevant for mental health outcomes for sexual minority youths, yet no studies have focused on the relationship between parenting and educational outcomes for sexual minorities. Our results confirm the protective role of parents with regard to schooling in a national sample that included SSAY. Parent support was significantly associated with—and a protective for—higher GPAs, levels of school belonging, and fewer school troubles for all youths. Sexual minorities reported significantly lower grades, less belonging, and more school troubles than their heterosexual counterparts. This particular finding itself is important: there is a disparity between heterosexual and sexual minorities that could put SSAY at greater risk regardless of whether or not parent support differs across sexuality groups. In addition, higher parent support was associated with more school belonging for all adolescents. However, when sexual minorities reported low levels of parental support, they also reported significantly lower school belonging compared to their other-sex-attracted counterparts. This finding suggests that supportive parent relationships are especially protective and contribute to better educational outcomes for sexual minority youths compared to their heterosexual counterparts.

Consistent with the accumulated literature that points to multiple disparities for sexual minority youths, results indicate that sexual minorities reported lower

values for all three academic outcomes compared to heterosexuals. This pattern of findings speaks to the importance of considering which relationships may be protective for academic outcomes among SSAY, which is a finding consistent with earlier reports based on these data (Russell et al., 2001). However, the association of parent support to those outcomes did not vary by group. Yet importantly, SSAY who struggle to belong at school may need more support. The results point to the importance of school belonging as a factor that may be sensitive to parental support. This measure of school belonging may be capturing negative school climates for sexual minorities. Although the study did not directly measure constructs such as antigay bullying at schools, the patterns of association for school belonging are consistent with the notion that sexual minority youths report less belonging, which has implications for achievement and other troubles at school.

Our results corroborate other findings that implicate parent relationships as important influences on the development of all youths, but perhaps especially sexual minority youths who face greater risks to their academic success. Previous research links parental acceptance of same-sex attractions to positive mental health (Doty et al., 2010; McDowell & Serovich, 2007), less victimization and loneliness (Mustanski, Newcomb, & Garofalo, 2011), and less substance abuse (Ryan et al., 2009). This study adds to this growing work by considering academic outcomes: If adolescents face troubles at school and have less of a sense of belonging, it makes sense that they may rely more on support from parents (Rohner, 2010), particularly for sexual minority youths (Kosciw et al., 2009; Kosciw et al., 2012), many of whom have compounded unsupportive school contexts. When a support network is absent at home and school, youths are left with few avenues through which to acquire the necessary tools for academic success and well-being.

Limitations and further implications

Although the data available in Add Health are nationally representative, there were restrictions on the availability of sexual minority-specific information. There are no items included in the first wave of Add Health that measure sexual identity, so results cannot generalize to studies that inquire whether participants identify as gay, lesbian, or bisexual. For example, we argue that parents are particularly important for school experiences—experiences that may be compromised due to sexual identity (e.g., bias-based harassment, loneliness). However, these school experiences may be linked to others' knowledge of one's sexual identity; this link may not be as clear for youths who report they are same-sex attracted yet have not disclosed their non-sexual majority attractions. Examining operationalizations of sexual minority (e.g., identity or behavior) might illuminate different patterns of school experiences for youths.

In addition, this study was unable to distinguish between sexual minority-specific and general parent support; rejection on the basis of sexual minority status (rather than general rejection by parents) might relate to academic outcomes differently.

Therefore, a major limitation to this project is the inability to disentangle the processes associated with parenting that are distinct for sexual minorities; only with such measures can scholars directly test minority-specific models for development, such as the minority stress model (see Meyer, 2003). To do this, studies designed to understand trajectories and experiences specific to sexual minority youths are crucial (D'Augelli et al., 2005). Another limitation of the present study is the reliance on adolescent-reported parental support, since adolescent perceptions may differ from parent reports or objective measures. Furthermore, although we reported statistically significant results, our findings must be interpreted with caution due to the relatively small magnitudes of effects.

Our results are based on a cohort of U.S. adolescents that are now young adults: dramatic social changes regarding the social acceptance and visibility of homosexuality have undoubtedly altered the experiences of contemporary sexual minority adolescents in comparison to prior cohorts. Yet there is ample evidence that contemporary sexual minority adolescents face challenges both at home and at school. Thus, the differences we see between OSAY and SSAY in the link between parental support and school belonging seem equally applicable to today's sexual minority youths. Further studies of this association with contemporary sexual minority youth are warranted.

In summary, our findings, coupled with projects that explore sexual minority educational experiences (Kosciw et al., 2009; Kosciw et al., 2012), suggest that parenting may operate in unique ways for sexual minority youths, and that these youths may be at greater risk in the school environment. As the body of research on sexual minority populations grows, it is important to consider the dynamic interactions across key developmental contexts that may threaten and protect adolescent well-being. Thus, scholars need to identify protective factors (e.g., healthy parent-adolescent relationships) that may ameliorate the negative outcomes associated with risky and dangerous school environments. We suggest that scholars measure SSA-specific parenting to further understand how to best support SSAY in contexts outside of the family. Because sexual minority youths must oftentimes rely on a "chosen family" (i.e., nonbiological adults and/or peers that provide support to SSAY; for review see Shippy, Cantor, & Brennan, 2004), it is important to consider how the larger family system may provide different forms of support to sexual minority adolescents.

Notes

1. *Sexual minority* is an umbrella term that we use to be inclusive of same-sex attractions and behaviors, as well as identities.

Funding

The authors acknowledge support for this research from a National Science Foundation Graduate Research Fellowship awarded to the first author: Grant No. DGE-1143953, and from the Fitch Nesbitt Endowment (Norton School, University of Arizona) in support of the third

author. This research uses data from Add Health, a program project directed by Kathleen Mullan Harris and designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris at the University of North Carolina at Chapel Hill, and funded by grant P01-HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Information on how to obtain the Add Health data files is available on the Add Health website (<http://www.cpc.unc.edu/addhealth>). No direct support was received from grant P01-HD31921 for this analysis.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage Publications, Inc.
- Conger, R. D., & Elder, Jr., G. H. (1994). *Families in troubled times: Adapting to change in rural America: Social institutions and social change*. Hawthorne, NY: Aldine de Gruyter.
- Crockett, L. J., Veed, G. J., & Russell, S. T. (2010). Do measures of parenting have the same meaning for European, Chinese, and Filipino American adolescents? Tests of measurement equivalence. In S. T. Russell, L. J. Crockett, & R. K. Chao (Eds.), *Asian American parenting and parent-adolescent relationships* (pp. 17–35). New York, NY: Springer.
- D’Augelli, A. R., Grossman, A. H., Salter, N. P., Vasey, J. J., Starks, M. T., & Sinclair, K. O. (2005). Predicting the suicide attempts of lesbian, gay, and bisexual youth. *Suicide and Life-Threatening Behavior*, 35(6), 646–660. doi: 10.1521/suli.2005.35.6.646
- D’Augelli, A. R., Hershberger, S. L., & Pilkington, N. W. (1998). Lesbian, gay, and bisexual youth and their families: Disclosure of sexual orientation and its consequences. *American Journal of Orthopsychiatry*, 68, 361–671. doi: 10.1037/h0080345
- Doty, N. D., Willoughby, B. L. B., Lindahl, K. M., & Malik, N. M. (2010). Sexuality related social support among lesbian, gay, and bisexual youth. *Journal of Youth and Adolescence*, 39, 1134–1147. doi: 10.1007/s10964-010-9566-x
- Dubow, E. F., Boxer, P., & Huesmann, L. R. (2009). Long-term effects of parents’ education on children’s educational and occupational success: Mediation by family interactions, child aggression, and teenage aspirations. *Merrill-Palmer Quarterly*, 55(3), 224–249. doi: 10.1353/mpq.0.0030
- DuMouchel, W. H., & Duncan, G. J. (1983). Using sample survey weights in multiple regression analyses of stratified samples. *Journal of the American Statistical Association*, 78(383), 535–543. doi: 10.1080/01621459.1983.10478006
- Harris, K. M., Halpern, C. T., Whitsel, E., Hussey, J., Tabor, J., Entzel, P., & Udry, J. R. (2009). The National Longitudinal Study of Adolescent Health: Research design. Retrieved from <http://www.cpc.unc.edu/projects/addhealth/design>
- Hegna, K., & Wichstrøm, L. (2007). Suicide attempts among Norwegian gay, lesbian and bisexual youths general and specific risk factors. *Acta Sociologica*, 50(1), 21–37. doi: 10.1177/0001699307074880
- Kosciw, J. G., Greytak, E. A., Bartkiewicz, M. J., Boesen, M. J., & Palmer, N. A. (2012). *The 2011 national school climate survey: The experiences of lesbian, gay, bisexual and transgender youth in our nation’s schools*. New York, NY: GLSEN (the Gay, Lesbian and Straight Education Network).
- Kosciw, J. G., Greytak, E. A., & Diaz, E. M. (2009). Who, what, where, when, and why: Demographic and ecological factors contributing to hostile school climate for lesbian, gay, bisexual,

- and transgender youth. *Journal of Youth and Adolescence*, 38(7), 976–988. doi: 10.1007/s10964-009-9412-1
- McDowell, T. L., & Serovich, J. M. (2007). The effect of perceived and actual social support on the mental health of HIV-positive persons. *AIDS Care*, 19(10), 1123–1129. doi: 10.1080/09540120701402830
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, 129(5), 674–697. doi: 10.1037/0033-2909.129.5.674
- Murdock, T. B., & Bolch, M. B. (2005). Risk and protective factors for poor school adjustment in lesbian, gay, and bisexual (LGB) high school youth: Variable and person-centered analyses. *Psychology in the Schools*, 42, 159–172. doi: 10.1002/pits.20054
- Mustanski, B., Newcomb, M. E., & Garofalo, R. (2011). Mental health of lesbian, gay, and bisexual youths: A developmental resiliency perspective. *Journal of Gay & Lesbian Social Services*, 23(2), 204–225. doi: 10.1080/10538720.2011.561474
- Needham, B. L., & Austin, E. L. (2010). Sexual orientation, parental support, and health during the transition to young adulthood. *Journal of Youth and Adolescence*, 39(10), 1189–1198. doi: 10.1007/s10964-010-9533-6
- Pearson, J., Muller, C., & Wilkinson, L. (2007). Adolescent same-sex attraction and academic outcomes: The role of school attachment and engagement. *Social Problems*, 54(4), 523–542. doi: 10.1525/sp.2007.54.4.523
- Pearson, J., & Wilkinson, L. (2013). Family relationships and adolescent well-being: Are families equally protective for same-sex attracted youth? *Journal of Youth and Adolescence*, 42(3), 376–393. doi: 10.1007/s10964-012-9865-5
- Poteat, V. P., Mereish, E. H., DiGiovanni, C. D., & Koenig, B. W. (2011). The effects of general and homophobic victimization on adolescents psychosocial and educational concerns: The importance of intersecting identities and parent support. *Journal of Counseling Psychology*, 58(4), 597–609. doi: 10.1037/a0025095
- Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interaction effects in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of Educational and Behavioral Statistics*, 31, 437–448. doi: 10.3102/10769986031004437
- Resnick, M. D., Bearman, P.S., Blum, R.W., Bauman, K. E., Harris, K. M., Jones, J., ... Udry, J. R. (1997). Protecting adolescents from harm: Findings from the National Longitudinal Study on Adolescent Health. *Journal of the American Medical Association*, 278(10), 823–832.
- Rohner, R. P. (2010). Perceived teacher acceptance, parental acceptance, and the adjustment, achievement, and behavior of school-going youths internationally. *Cross-Cultural Research*, 44, 211–221. doi: 10.1177/1069397110366849
- Rohner, R. P., Khaleque, A., & Cournoyer, D. E. (2005). Parental acceptance-rejection: Theory, methods, cross-cultural evidence, and implications. *Ethos*, 33(3), 299–334. doi: 10.1525/eth.2005.33.3.299
- Russell, S. T., & Consolacion, T. B. (2003). Adolescent romance and emotional health in the United States: Beyond binaries. *Journal of Clinical Child and Adolescent Psychology*, 32(4), 499–508. doi: 10.1207/S15374424JCCP3204_2
- Russell, S. T., & Joyner, K. (2001). Adolescent sexual orientation and suicide risk: Evidence from a national study. *American Journal of Public Health*, 91(8), 1276–1281. doi: 10.2105/AJPH.91.8.1276
- Russell, S. T., Ryan, C., Toomey, R. B., Diaz, R. M., & Sanchez, J. (2011). Lesbian, gay, bisexual, and transgender adolescent school victimization: Implications for young adult health and adjustment. *Journal of School Health*, 81(5), 223–230. doi: 10.1111/j.1746-1561.2011.00583.x

- Russell, S. T., Seif, H., & Truong, N. L. (2001). School outcomes of sexual minority youth in the United States: Evidence from a national study. *Journal of Adolescence*, *24*, 111–127. doi: 10.1006/jado.2000.0365
- Ryan, C., Huebner, D., Diaz, R., & Sanchez, J. (2009). Family rejection as a predictor of negative health outcomes in White and Latino lesbian, gay, and bisexual young adults. *Pediatrics*, *123* (1), 346–352. doi: 10.1542/peds.2007-3524
- Ryan, C., Russell, S. T., Huebner, D., Diaz, R., & Sanchez, J. (2010). Family acceptance in adolescence and the health of LGBT young adults. *Journal of Child and Adolescent Psychiatric Nursing*, *23*(4), 205–213. doi: 10.1111/j.1744-6171.2010.00246.x
- Savin-Williams, R. C. (2003). Lesbian, gay, and bisexual youths' relationships with their parents. In L. D. Garnets & D. C. Kimmel (Eds.), *Psychological perspectives on lesbian, gay, and bisexual experiences* (2nd ed., pp. 299–326). New York, NY: Columbia University Press.
- Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology*, *57*(1), 1–10. doi: 10.1037/a0018082
- Shippy, R. A., Cantor, M. H., & Brennan, M. (2004). Social networks of aging gay men. *The Journal of Men's Studies*, *13*(1), 107–120. doi: 10.3149/jms.1301.107
- Steinberg, L. (2001). We know some things: Parent–adolescent relationships in retrospect and prospect. *Journal of Research on Adolescence*, *11*(1), 1–19. doi: 10.1111/1532-7795.00001
- Steinberg, L., Elmen, J.D., & Mounts, N. S. (1989). Authoritative parenting, psychosocial maturity, and academic success among adolescents. *Child Development*, *60*, 1424–1436.
- Stice, E., & Barrera, M., Jr. (1995). A longitudinal examination of the reciprocal relations between perceived parenting and adolescents' substance use and externalizing behaviors. *Developmental Psychology*, *31*, 322–334. doi: 10.1037/0012-1649.31.2.322
- Toomey, R. B., Ryan, C., Diaz, R. M., Card, N. A., & Russell, S. T. (2010). Gender-nonconforming lesbian, gay, bisexual, and transgender youth: School victimization and young adult psychosocial adjustment. *Developmental Psychology*, *46*(6), 1580. doi: 10.1037/a0020705
- Ueno, K., Peña-Talamantes, A. E., & Roach, T. A. (2013). Sexual orientation and occupational attainment. *Work and Occupations*, *40*(1), 3–36. doi: 10.1177/0730888412460532