Disparities for LGBTQ and Gender Nonconforming Adolescents

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OBJECTIVES: To identify patterns of childhood adversity in a sample of adolescents and assess disparities in these experiences for lesbian, gay, bisexual, transgender, and questioning adolescents and by level of gender nonconformity.

METHOD By using the cross-sectional, statewide, anonymous 2016 Minnesota Student Survey, 81 885 students were included in the current study (50.59% male; mean age = 15.51). Participants were enrolled in grades 9 and 11 in a total of 348 schools.

RESULTS: Four patterns of childhood adversity were identified with sex-stratified latent class analyses (entropy = 0.833 males; 0.833 females), ranging from relatively low levels of abuse (85.3% males; 80.1% females) to polyvictimization (0.84% males; 1.98% females). A regression analysis showed that compared with heterosexual adolescents, gay, lesbian, bisexual, and questioning adolescents were more likely to be classified into profiles characterized by polyvictimization (odds ratio [OR] 1.81–7.53) and psychological and/or physical abuse (OR 1.29–3.12), than no or low adversity. Similarly, compared with nontransgender adolescents, transgender adolescents were more likely to be classified into profiles characterized by patterns of polyvictimization (OR 1.49–2.91) and psychological and/or physical abuse (OR 1.23–1.96). A higher level of gender nonconformity predicted a higher likelihood of being classified into each adversity profile compared with the no or low adversity profile (OR 1.14–1.45).

CONCLUSIONS: Sexual minority adolescents and adolescents with high levels of gender nonconformity are vulnerable to experience adversity. The disparities for lesbian, gay, bisexual, transgender, and questioning adolescents and adolescents with high gender nonconformity highlight the variation in patterns of childhood adversity that these youth are at risk of experiencing. The findings reveal the need for further research on the benefits and harm of screening for childhood adversity by physicians and pediatricians.

abstract

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WHAT'S KNOWN ON THIS SUBJECT: Lesbian, gay, bisexual, transgender, and questioning (LGBTQ) and gender nonconforming adolescents experience high rates of parental abuse and polyvictimization. There is currently no knowledge of patterns of adversity for these youth. Awareness of patterns of childhood adversity could help physicians and pediatricians to monitor these experiences.

WHAT THIS STUDY ADDS: LGBTQ adolescents are more likely to experience patterns of abuse compared with heterosexual adolescents. Adversity among LGBTQ adolescents and those with high levels of gender nonconformity should be monitored. Primary physicians and pediatricians may be first lines of contact.

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Lesbian, gay, bisexual, transgender, and questioning (LGBTQ) adolescents and adults and those with high levels of gender nonconformity show elevated rates of depression and suicidality.[1–3] Victimization is an important contributor to these health disparities.[1–3] A meta-analysis has revealed that sexual minority individuals (ie, lesbian, gay, bisexual, and questioning) are up to 3 times more likely to experience abuse during childhood.[4] Specific to parents, sexual minority individuals are more likely to report various forms of parental abuse and household dysfunction during childhood.[5–9] However, there is currently no research in which the types of childhood adversity that co-occur are examined and whether LGBTQ adolescents, and those with high gender nonconformity, are more likely to experience patterns of abuse. This knowledge could aid physicians and pediatricians in being alerted to these experiences.[10–12]

Parents' responses to their child's disclosure of their sexual orientation, gender identity, or gender expression (ie, mannerisms, appearance, activity[13]) can be abusive.[4,9,14,15] For example, a sibling study[16] in which experiences of sexual minority and heterosexual siblings were compared revealed that sexual minority individuals reported more childhood psychological and physical abuse; the findings indicate that sexual minority youth may be "singled out by their parents for maltreatment" (p. 483).[16] Gender nonconforming adolescents also experience higher rates of abuse.[2,9,17,18] Because gender expression in childhood is associated with sexual orientation in adolescence,[19] early gender nonconforming behavior may make children targets of abuse before a youth's disclosure or awareness of their sexual orientation.

Researchers of adverse childhood experiences[20] have argued that there are certain conditions in which children grow up that separately and cumulatively create an environment that may negatively affect children's development. These adverse conditions range from household dysfunction, such as parental substance abuse and domestic violence to childhood abuse including psychological, physical, and sexual abuse. On average, sexual minority adults report more adverse childhood experiences than heterosexual adults,[21–25] and bisexual adults are particularly vulnerable to these experiences.[21,24]

Although experiences of victimization are also common among transgender adolescents and those with high levels of gender nonconformity[26–31] and research has revealed that the more gender nonconforming an individual is the more abuse they experience,[26,28] there is currently no research documenting the prevalence of childhood adversity for transgender adolescents compared with nontransgender adolescents or for adolescents with high levels of gender nonconformity.

Researchers of adverse childhood experiences often use a cumulative risk approach.[20,32,33] Although it is important to know that sexual minority adults are more likely to report experience with multiple adverse childhood experiences (polyvictimization),[21–24] it is currently unclear what experiences are likely to co-occur; some adverse experiences may be more likely to co-occur than others. Furthermore, it is currently unclear whether LGBTQ adolescents and adolescents with high levels of gender nonconformity are more likely to report cumulative childhood adversity and certain patterns of abuse. A person-centered approach enables the identification of typologies of childhood adversity, answering questions such as the following: What types of adversity are likely to co-occur? And are LGBTQ youth and those with high levels of gender nonconformity more likely to experience specific patterns of adversity?

In the current study, adolescents' sexual orientation, gender identity, and gender nonconformity are used to predict disparities in cumulative childhood adversity, as well as patterns of childhood adversity. Following previous work,[21–24] it is hypothesized that LGBTQ adolescents and those with relatively high levels of gender nonconformity are more likely to experience all types of childhood adversity compared with heterosexual and nontransgender adolescents. On the basis of research revealing disparities in experiences of childhood adversity[4,21,24] for bisexual youth compared with lesbian and gay adolescents, bisexual adolescents seem to be at risk. High rates of victimization and subsequent detrimental health outcomes may be explained by the finding that bisexual youth experience unique stigma, often from both heterosexual and LGBTQ communities.[34–36] Disparities in childhood adversity are therefore expected to be most prominent for bisexual adolescents. Because there are important differences in the number and type of experiences of childhood adversity for male and female adolescents[37,38] and also among LGBTQ adolescents,[4,39] all analyses are sex stratified.

METHODS

Data Source

The current study includes data from the 2016 Minnesota Student Survey provided by public school students in Minnesota via local public school districts (or alternative education programs) and managed by the Minnesota Student Survey Interagency Team 2016.[40]

Sexual orientation, gender identity, and gender nonconformity were only assessed in grades 9 and 11; therefore, grades 5 and 8 were excluded from the current

TABLE 1 Demographic Characteristics and Descriptive Sample Statistics

	Full Sample (N = 81 885)	Gay or Lesbian (n = 1027)	Bisexual (n = 4014)	Questioning (n = 3272)	Heterosexual (n = 72 305)	Transgender (n = 2168)	Nontransgender (n = 78 761)
Biological sex male, %	50.49	45.36	21.01	35.43	52.85	31.95	50.87
Age, mean (SD)	15.51 (1.13)	15.59 (1.15)	15.52 (1.13)	15.42 (1.16)	15.52 (1.12)	15.48 (1.16)	15.51 (1.12)
Heterosexual, %	89.69	—	—	—	—	—	—
Gay or lesbian, %	1.27	—	—	—	—	—	—
Bisexual, %	4.98	—	—	—	—	—	—
Not sure (questioning), %	4.06	—	—	—	—	—	—
Transgender, %	2.68	32.88	22.00	16.13	0.54	—	—
Gender nonconformity, mean (SD)	1.74 (0.88)	3.04 (1.13)	2.40 (0.93)	2.31 (1.01)	1.65 (0.83)	2.84 (1.15)	1.70 (0.85)
FRPM, %	27.37	33.17	40.54	37.75	25.87	38.81	26.79
Race and/or ethnicity, %							
American Indian or Alaskan Native	5.62	7.35	11.56	6.77	5.21	10.49	5.48
Asian American	8.31	10.10	8.02	14.63	7.91	13.32	8.06
Black, African, or African American	9.60	13.57	12.20	12.75	9.12	11.98	9.42
Native Hawaiian or other Pacific Islander	1.11	2.45	2.00	1.62	1.01	2.92	1.06
White	84.31	82.24	83.97	74.05	85.08	77.19	84.74
Hispanic	8.80	10.13	11.11	10.57	8.51	11.76	8.65
Somali	1.75	1.85	0.60	3.94	1.62	4.80	1.60
Hmong	2.99	3.51	2.19	5.29	2.88	4.15	2.88
Childhood adversity, %							
Parent or guardian in prison	15.95	24.42	31.01	18.32	14.94	26.93	15.67
Live with problem drinker	10.28	17.97	18.29	13.74	9.57	19.86	10.03
Live with drug abuser	4.97	9.20	12.75	7.37	4.39	12.25	4.79
Psychological abuse	13.33	28.26	31.81	20.07	11.81	32.09	12.83
Physical abuse	11.52	22.79	24.51	17.14	10.42	24.48	11.18
Witness domestic abuse	6.35	12.67	14.65	10.39	5.62	14.61	6.12
Sexual abuse by nonfamily	3.81	12.29	16.19	7.23	2.85	13.36	3.55
Sexual abuse by family member	2.30	8.73	8.65	5.00	1.74	9.23	2.11
Total No. Experiences, mean (SD)	0.68 (1.19)	1.35 (1.71)	1.56 (1.70)	0.98 (1.42)	0.61 (1.10)	1.51 (1.73)	0.66 (1.16)

Because participants could skip items, sample sizes vary for separate items. Percentages are unweighted. FRPM was used as an indicator of SES. FRPM, free or reduced-price lunch at school; —, not applicable.

analyses. Data from a total of 81 885 adolescents enrolled in 348 schools were included in the current analyses with a mean age of 15.51 (SD = 1.13). See Table 1 for a full description of the sample.

The Minnesota Student Survey is administered every 3 years in schools throughout the state of Minnesota to monitor the health and well-being of adolescents. Of the 330 operating public school districts that were invited to participate in the survey, 282 (85.5%) participated. Parents of students were asked for passive consent. Student participation is voluntary and anonymous. The University of Groningen, Department of Pedagogy and Educational Sciences' Institutional Review Board has deemed this study of secondary data to be exempt.

Childhood Adversity

Experiences of lifetime household dysfunction and childhood abuse were assessed with 8 items, previously used as part of the adverse childhood experiences scale with (young) adult samples[24,41,42]: Parent or guardian in prison: "Have any of your parents or guardians ever been in jail or prison? (Mark all that apply)," with answer options "None of my parents or guardians has ever been in jail or prison" (0), "Yes, I have a parent or guardian in jail or prison right now," and "Yes, I have had a parent or guardian in jail or prison in the past" (1). Live with problem drinker: "Do you live with anyone who drinks too much alcohol?" Live with drug abuser: "Do you live with anyone who uses illegal drugs or abuses prescription drugs?" Psychological abuse: "Does a parent or other adult in your home regularly swear at you, insult you or put you down?" Physical abuse: "Has a parent or other adult in your household ever

hit, beat, kicked or physically hurt you in any way?" Witnessed domestic abuse: "Have your parents or other adults in your home ever slapped, hit, kicked, punched or beat each other up?" Sexual abuse by nonfamily: "Has any adult or other person outside of the family ever touched you sexually against your wishes or forced you to touch them sexually?" Sexual abuse by family member: "Has any older or stronger member of your family ever touched you or had you touch them sexually?" with answer options "Yes" (1) and "No" (0). All adversity items were summed (ranging from 0 to 8) to create a score for cumulative childhood adversity.

Biological Sex, Gender Identity, Gender Nonconformity, and Sexual Orientation

In order of presentation in the survey: Biological sex was assessed with the item "What is your biological sex?" with answer options "Male" (1) and "Female" (0). Whether adolescents identified as transgender was assessed with a single item[39]: "Do you consider yourself transgender, genderqueer, genderfluid, or unsure about your gender identity?" with answer options "Yes" (1) and "No" (0). Level of gender nonconformity[43,44] was assessed with a single item: "A person's appearance, style, dress, or the way they walk or talk may affect how people describe them. How do you think other people at school would describe you?" Answer options ranged from "1 = Very or mostly feminine" to "5 = Very or mostly masculine." Scores were recoded for males so that higher scores indicate higher levels of gender nonconformity. Supplemental Table 6 presents the percentage of gender nonconformity scores by sexual orientation and gender identity. Sexual orientation was assessed with a single item: "Which of the following best describes you?" with answer options "Heterosexual (straight)," "Bisexual," "Gay or Lesbian," and "Not sure (questioning)."

Covariates

Age was included as a continuous covariate. Ethnicity was assessed with 3 items. Adolescents were asked whether they were Hispanic or Latino/a, Somali, or Hmong with answer options "Yes" (1) and "No" (0). Race was assessed with the following item: "In addition, what is your race? (if more than 1 describes you, mark all that apply)," with answer options American Indian or Alaskan Native; Asian American; black, African, or African American; Native Hawaiian or Other Pacific Islander; or white. Race and ethnicity categories were nonmutually exclusive and added to the models. Socioeconomic status (SES) was assessed with a single item: "Do you currently get free or reduced-price lunch at school?" with answer options "Yes" (1) and "No" (0).

Statistical Analyses

Disparities for LGBTQ adolescents, and by level of gender nonconformity, in cumulative childhood adversity were assessed with a sex-stratified linear regression analysis in Stata 15.0 (adjusted for clustering by using *svy*) by using the sum score of experiences with childhood adversity as the dependent variable and sexual orientation, gender identity, and gender nonconformity as independent variables, controlling for SES, age, and race and/or ethnicity.

To assess patterns of childhood adversity, latent class analyses (LCAs) were conducted with solutions ranging from 2 to 7 latent classes in Mplus version 7.0, accounting for the nested (complex) structure of the data (students nested in schools). The LCA procedure enables the identification of latent classes on the basis of manifest variables and is often used to identify profiles of risk that might benefit from prevention or intervention efforts.[45–48] A 3-step LCA procedure was used to predict

class membership. In this approach, the uncertainties (ie, measurement error) when assessing the most likely class memberships and in predicting class membership from covariates are taken into account.[49,50] In this procedure, the predictors (covariates) of class memberships are added simultaneously (adolescent's sexual orientation and gender identity, gender nonconformity, SES, age, and race and/or ethnicity). The 3-step LCA procedure was conducted for male and female adolescents separately.

Four statistics were used to determine the best LCA solution: (1) Entropy was used to assess how well individual cases could be classified, with larger values indicating a clearer delineation of profiles; (2) the Bayesian Information Criterion (BIC) was used as a measure of model fit, with lower values indicating that an estimated model is more likely to be the true model; and (3) the Vuong-Lo-Mendell-Rubin likelihood ratio test (LRT); and (4) the Lo-Mendell-Rubin Adjusted LRT were used to indicate whether a solution with k-classes provided a significantly better fit to the data than a solution with $k - 1$ classes. A nonsignificant P value for these LRTs ($P > .05$) indicates that a solution with 1 more class is not needed. Finally, the interpretability of classes was used to evaluate the LCA solutions.

The 3-step LCA procedure provides multinomial logistic regression analyses comparing class membership in 1 class to each other, predicted by the covariates. Regression coefficients were transformed to odds ratios to aid the interpretation of results.[51]

RESULTS

Predicting Cumulative Childhood Adversity

The results of assessing cumulative risk of childhood adversity by using

the sum score of experiences in a regression analysis reveal that both male and female LGBTQ adolescents had higher scores of cumulative childhood adverse experiences; a higher level of gender nonconformity was associated with a higher score of cumulative childhood adverse experiences (B's = 0.17–0.68, P's < .001; see Table 2).

Complex 3-Step LCAs of Childhood Adversity

To assess patterns of childhood adversity, several LCAs were conducted. On the basis of fit statistics (see Table 3), the 4-class model was determined to be the best fitting model for both male and female adolescents. The 4-class solution had a high entropy and relatively low BIC among both males and females. Table 4 includes descriptive information of each class. The first class is labeled "No/low adversity" because of the relatively low probabilities of adversity for both male and female adolescents. Despite there being a sizable group of adolescents (n = 49 932) who reported not experiencing any of the adverse events, these adolescents were grouped together with adolescents who reported a relatively low number of adverse events. The second class is labeled "Household dysfunction," with relatively high probabilities of household dysfunction and relatively low probabilities of abuse for both male and female adolescents. The third class is labeled "Polyvictimization" and characterized by relatively high probabilities for all adverse experiences among both male and female adolescents. The fourth class is labeled "Psychological, physical abuse," with relatively low probabilities of household dysfunction and sexual abuse, but relatively high probabilities of psychological and physical abuse for both male and female adolescents.

TABLE 2 Survey Adjusted Regression Model Predicting Cumulative Childhood Adversity by Sexual Orientation, Gender Identity, and Gender Nonconformity (N = 71 877)

| | Polyvictimization Count Score | | | |
| | Male Adolescents | | Female Adolescents | |
	B (SE)	β	B (SE)	β
Sexual orientation (reference: heterosexual)				
Gay or lesbian	0.44 (0.08)***	.08	0.43 (0.08)***	.04
Bisexual	0.46 (0.05)***	.11	0.68 (0.03)***	.14
Questioning	0.17 (0.05)***	.05	0.20 (0.04)***	.03
Transgender (reference: nontransgender)	0.42 (0.07)***	.09	0.19 (0.05)***	.03
Gender nonconformity (range = 1–4)	0.08 (0.01)***	.12	0.13 (0.01)***	.09

Controlling for SES, age, and race and/or ethnicity. B; understandardized regression coefficient.
*** P < .001.

TABLE 3 Fit Statistics for Complex 3-Step LCAs on Childhood Adversity (N = 77 134)

	Entropy	BIC	Vuong-Lo-Mendell-Rubin LRT	Lo-Mendell-Rubin Adjusted LRT
Male adolescents				
2 classes	0.803	134 041	<0.001	<0.001
3 classes	0.835	133 083	<0.001	<0.001
4 classes	0.833	132 329	0.043	0.044
5 classes	0.797	132 102	<0.001	<0.001
6 classes	0.805	131 939	<0.001	<0.001
7 classes	0.820	131 945	0.037	0.039
Female adolescents				
2 classes	0.772	168 905	<0.001	<0.001
3 classes	0.806	167 925	<0.001	<0.001
4 classes	0.833	167 128	<0.001	<0.001
5 classes	0.787	166 507	<0.001	<0.001
6 classes	0.761	166 451	0.011	0.011
7 classes	0.783	166 302	0.005	0.005

The following covariates are added into the 3-step LCA: gender and sexual identity, gender nonconformity, SES, age, and race and/or ethnicity.

Predicting Childhood Adversity Typologies

Whether LGBTQ adolescents were more likely to be classified into 1 of the adversity classes (compared with the "No/low adversity" class) was assessed with a multinomial logistic regression analysis in a 3-step LCA procedure, as well as the association between gender nonconformity and the classification into 1 of the adversity classes (see Table 5).

Biological Male Adolescents

Compared with heterosexual adolescents, gay or lesbian and bisexual adolescents were more likely to be classified into each adversity profile compared with the "No/low adversity" profile. Questioning adolescents were more likely to be classified into the "Polyvictimization" profile and the "Psychological/physical abuse" profile but not the "Household dysfunction" profile. Compared with nontransgender adolescents, transgender adolescents were more likely to be classified into each adversity profile compared with the "No/low adversity" profile. Last, a higher level of gender nonconformity was related to a higher likelihood of being classified into each adversity profile, compared with the "No/low adversity" profile.

Biological Female Adolescents

Compared with heterosexual adolescents, gay or lesbian, bisexual, and questioning adolescents were more likely to be classified into the "Polyvictimization" profile, the "Psychological/physical abuse"

TABLE 4 Probabilities of Experiencing Childhood Adversity Across 4 Latent Classes for Male and Female Adolescents (N = 77 134)

Full Sample	Male Adolescents				Female Adolescents			
	1. No or Low Adversity (n = 32661; 85.26%)	2. Household Dysfunction (n = 2573; 6.72%)	3. Polyvictimization (n = 321; 0.84%)	4. Psychological and/or Physical Abuse (n = 2755; 7.19%)	1. No/Low Adversity (n = 31092; 80.08%)	2. Household Dysfunction (n = 3537; 9.10%)	3. Polyvictimization (n = 764; 1.98%)	4. Psychological and/or Physical Abuse (n = 3431; 8.84%)
Parent or guardian in prison	0.08	0.46	0.59	0.37	0.08	0.47	0.55	0.39
Live with problem drinker	0.03	0.38	0.55	0.27	0.03	0.42	0.28	0.32
Live with drug abuser	0.01	0.21	0.58	0.15	0.01	0.21	0.19	0.17
Psychological abuse	0.03	0.28	0.70	0.57	0.05	0.38	0.47	0.69
Physical abuse	0.04	0.00	0.75	1.00	0.03	0.00	0.47	1.00
Witness domestic abuse	0.00	0.13	0.73	0.35	0.01	0.20	0.33	0.42
Sexual abuse by nonfamily	0.00	0.03	0.70	0.02	0.02	0.09	0.97	0.13
Sexual abuse by family member	0.00	0.03	0.65	0.01	0.01	0.05	0.68	0.07

profile, and the "Household dysfunction" profile compared with the "No/low adversity" profile. Compared with nontransgender adolescents, transgender adolescents were more likely to be classified into each adversity profile compared with the "No/low adversity" profile. Last, a higher level of gender nonconformity was related to a higher likelihood of being classified into each adversity profile compared with the "No/low adversity" profile.

DISCUSSION

There were 2 aims in the current study: (1) to identify patterns in childhood adversity in a large statewide sample of adolescents and (2) to assess disparities for LGBTQ adolescents and those with a high level of gender nonconformity in cumulative as well as patterns of childhood adversity. Corroborating previous work among adults,[21–24] the findings reveal that LGBTQ adolescents and those with relatively high levels of gender nonconformity reported more (cumulative) types of childhood adversity compared with heterosexual and nontransgender adolescents. The current study is unique in that patterns of childhood adversity and disparities for LGBTQ adolescents were identified, and by level of gender nonconformity. The current findings point to 4 distinct groups of adolescents who have experience with different sets of adverse experiences: the largest group of adolescents reported relatively low levels of childhood adversity, whereas smaller groups reported high levels of household dysfunction, psychological and physical abuse, and polyvictimization. All groups were compared with the "relatively low adversity" group, and findings reveal that LGBTQ adolescents and those with relatively high levels of

gender nonconformity were more likely to experience most patterns of abuse. Disparities were particularly pronounced for bisexual adolescents and those with high levels of gender nonconformity. Although small in size, the group that experienced polyvictimization (0.84% of male subjects, 1.98% of female subjects) represents adolescents who experienced significant adversity. Youth who experience polyvictimization have the greatest risk for negative outcomes, such as poor mental health.[52–54] Thus, the finding that LGBTQ adolescents and those with relatively high levels of gender nonconformity are more likely to experience polyvictimization is relevant in the context of the high risk for mental health problems among these youth.[3,55]

Findings for transgender adolescents need to be considered in the context of "biological sex"–stratified analyses. The results reveal that adolescents who identified as transgender were more likely to experience multiple types of childhood adversity (household dysfunction, psychological and/or physical abuse, and polyvictimization). These disparities were more pronounced in "biological male" transgender adolescents. Unfortunately, from the current data, adolescents' gender identity cannot be inferred; therefore, we cannot directly interpret this finding as a difference between transgender men and transgender women or transmasculine and transfeminine adolescents.

The models testing disparities all included gender nonconformity. Although gender nonconformity is, in general, confounded with sexual orientation and gender identity,[2,19] a higher level of gender nonconformity was found to predict all patterns of childhood adversity. The inclusion of the constructs sexual orientation and gender nonconformity at the

TABLE 5 Regression Models of Childhood Adversity Classes Predicted by Sexual Orientation, Gender Identity, and Gender Nonconformity

| | Male Adolescents (N = 35 281) | | | | | | Female Adolescents (N = 36 296) | | | | | |
| | Household Dysfunction | | Polyvictimization | | Psychological and/or Physical Abuse | | Household Dysfunction | | Polyvictimization | | Psychological and/or Physical Abuse | |
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Sexual orientation (reference: heterosexual)												
Gay or lesbian	1.71[a]	1.30–2.11	7.53[a]	6.93–8.13	1.90[a]	1.50–2.30	1.52[a]	1.12–1.93	2.86[a]	2.30–3.42	2.02[a]	1.69–2.35
Bisexual	2.91[a]	2.58–3.24	4.90[a]	4.36–5.44	3.04[a]	2.87–3.30	2.80[a]	2.65–2.96	5.80[a]	5.57–6.02	3.12[a]	2.98–3.26
Questioning	1.18	0.83–1.54	3.93[a]	3.46–4.39	1.29[a]	1.02–1.55	1.36[a]	1.13–1.58	1.81[a]	1.47–2.15	1.49[a]	1.31–1.68
Transgender (reference: nontransgender)	1.80[a]	1.39–2.21	2.91[a]	2.43–3.39	1.96[a]	1.61–2.31	1.30[a]	1.05–1.54	1.49[a]	1.16–1.82	1.23[a]	1.02–1.43
Gender nonconformity	1.25[a]	1.19–1.31	1.45[a]	1.27–1.62	1.14[a]	1.09–1.19	1.35[a]	1.29–1.41	1.35[a]	1.25–1.45	1.38[a]	1.33–1.43

Controlling for SES, age, and race and/or ethnicity. Reference = no or low adversity class. CI, confidence interval; OR, odds ratio.
[a] OR is significant.

same time allows for the inspection of disparities for sexual minority adolescents while controlling for gender nonconformity. This may be important because researchers have previously suggested sexual orientation disparities may be explained by adolescent's gender expression,[16,21,22] assuming that parents may be abusive to censor or control the gender expression of their child.[56,57] The current findings reveal that controlling for adolescents' gender expression or identity, sexual minority youth are at increased risk of childhood adversity. Thus, adolescents' self-reported gender expression is not the only explanation for the disparities found among sexual minority adolescents. Additional research on parental rejection and responses to adolescent's sexual orientation and gender expression is needed to examine different developmental pathways of adversity.

Although previous research has revealed disparities in household dysfunction for sexual minority individuals,[21,22] it is currently unclear why LGBTQ adolescents or those with high levels of gender nonconformity would be more likely to have, for example, a parent who has been incarcerated or abuses drugs. However, in contrast to previous work, the current study identified patterns of childhood adversity. The analyses identified only 1 pattern of adversity that was distinct in its high level of household dysfunction, and disparities for LGBTQ adolescents and those with high levels of gender nonconformity were not as pronounced as they were for the other adversity profiles.

In the current study, a contemporary adolescent sample is used to examine disparities for LGBTQ adolescents and those with high levels of gender nonconformity in childhood adversity. There are several limitations of the study and data to note. First, the current data are cross-sectional; this does not allow for the testing of effects of childhood adversity or explanatory models. These pathways could be tested with a longitudinal study. Second, the questions pertaining to childhood adversity do not ask when these adverse childhood experiences occurred. Especially for LGBTQ adolescents and those with high gender nonconformity, it may be relevant to ascertain when the adverse experience occurred and whether adolescents interpret these experiences to be related to their sexual orientation, gender identity, or gender expression. Third, as the data used in the current study are from a school-based sample, findings cannot be generalized to adolescents who do not attend school. Because unstably housed adolescents are more likely to experience abuse[58,59] and are more likely to identify as LGBTQ,[60] the current findings are likely an underestimation of the occurrence of childhood adversity among LGBTQ and gender nonconforming adolescents. Last, the current study includes adolescents from the state of Minnesota. Despite the size of the sample, current findings cannot be generalized to other geographic locations.

CONCLUSIONS

Although this study was not designed to estimate the prevalence of adversity, this large statewide survey does indicate how common these experiences are. The findings are not only evidence of the poor conditions in which many LGBTQ adolescents and those with high gender nonconformity grow up, the findings are also relevant for pediatricians and primary care physicians who are often the first to see these youth in their practices.[10]

From assessing these disparities it becomes clear that LGBTQ adolescents and those who are gender nonconforming are at increased risk for past or current experiences of abuse and at risk for developing health problems later in life because of these experiences.[22–24] Thus, more

research on disparities for LGBTQ adolescents, and those with high gender nonconformity, as well as mechanisms that explain parental rejection of their child's sexual orientation or gender expression and identity is needed. In addition, research into the harm and benefit of screening for family violence, child maltreatment, and child abuse is needed to design risk assessments and interventions that are effective and acknowledge the co-occurrence of adverse experiences.[61]

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ABBREVIATIONS

BIC: Bayesian Information Criterion
LCA: latent class analysis
LGBTQ: lesbian, gay, bisexual, transgender, and questioning
LRT: likelihood ratio test
SES: socioeconomic status

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