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Disparities in Persistent Victimization and Associated Internalizing Symptoms for Heterosexual Versus Sexual Minority Youth

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This study investigated whether lesbian, gay, and bisexual (LGB) adolescents were at higher risk for persistent victimization of bullying compared to heterosexual adolescents, and how victimization trajectories were associated with internalizing symptom development across LGB and heterosexual adolescents. Data came from a five-wave study ($M_{age}T1 = 11.1$ to $M_{age}T5 = 22.3$; $n = 151$ LGB; $n = 1,275$ heterosexual) and informants were adolescents and their parents. Adolescents were classified in three victimization trajectories: persistent (5.6%), decreasing (28.1%) or low (66.3%) victimization. LGB adolescents reported more persistent victimization, relative to no (OR = 6.79, 95% CI [3.52, 13.13]) or decreasing victimization (OR = 3.09, 95% CI [1.53, 6.24]), compared to heterosexual peers. Further, persistent victimization was more strongly associated with anxiety among LGB than among heterosexual adolescents.

Despite increases in the acceptance of sexual diversity in the previous decades (Hooghe & Meeusen, 2014), lesbian, gay and bisexual (LGB) adolescents nevertheless experience more bullying and forms of victimization than their heterosexual peers (Collier, Van Beusekom, Bos, & Sandfort, 2014; Friedman et al., 2011; La Roi, Kretschmer, Dijkstra, Veenstra, & Oldehinkel, 2016; Toomey, Russell, & Denny, 2016). Bullying is an aggressive act in the context of a power imbalance (Olweus, 1993; Volk, Veenstra, & Espelage, 2017) that can have long-lasting developmental health and social consequences for victims, including psychiatric illness, educational difficulties, and poor relationships with parents and peers (Copeland, Wolke, Angold, & Costello, 2013; Kretschmer et al., 2018). Most studies among LGB adolescents have focused on episodic victimization, and not considered disparities in developmental patterns of victimization. For example, continued and long-lasting ("persistent") victimization (Sterzing, Gibbs, Gartner, & Goldbach, 2017) has more detrimental health consequences than episodic victimization (Bowes et al., 2013).

Moreover, the associations of developmental patterns of victimization of LGB versus heterosexual adolescents with subsequent internalizing problems are unknown. Our study examines adolescent- and parent-reported victimization trajectories in LGB and heterosexual adolescents during adolescence, and associations with adolescents' self- and parent-reported internalizing problems from preadolescence to emerging adulthood.

Peer Victimization in LGB and Heterosexual Youth

The minority stress framework (Meyer, 2003) is often used to explain why LGB adolescents are bullied more frequently than their heterosexual peers. It posits that members of sexual minority groups experience stressors related to one's sexual minority identity, such as victimization and stigma, because the dominant environment and social

structures are often heteronormative or even homophobic in nature (Hatzenbuehler, 2016; Meyer, 2003). Thus, sexual minority individuals are considered to deviate from the norm and to be inferior to heterosexual individuals. Moreover, an important aspect of this framework is that exposure to minority stressors is thought to be long-lasting, thus chronic, or "persistent", because LGB individuals often remain in this marginalized position across contexts and developmental stages. In addition, LGB youth generally receive less support from peers or important adults such as parents or teachers, and these people may also be less likely to intervene when bullying occurs (Chesir-Teran, 2003; Pearson & Wilkinson, 2013; Williams, Connolly, Pepler, & Craig, 2005), making it more difficult for LGB youth to escape victimization. Adolescence is a period in which many LGB adolescents "come out", which can make them particularly vulnerable to social exclusion (Russell, Toomey, Ryan, & Diaz, 2014; Ryan, Legate, & Weinstein, 2015). Adolescents who later identify as LGB, even when they have not disclosed their sexual orientation to others, experience higher levels of peer victimization, potentially directed at their gender expression or internalizing symptoms (La Roi et al., 2016; Martin-Storey & Fish, 2019; Toomey, Card, & Casper, 2014).

Previous research that tested victimization disparities as posited by the minority stress framework (Meyer, 2003), has not examined differences in patterns or duration of victimization between LGB and heterosexual youth. Researchers often focused on mean-level victimization, showing that victimization was more prevalent among LGB adolescents than among heterosexual peers (Collier et al., 2014; Friedman et al., 2011; La Roi et al., 2016; Toomey et al., 2016). For example, a meta-analysis (Toomey et al., 2016) showed that sexual minority youth experienced moderately higher levels of school-based victimization compared to heterosexual youth ($d = 0.33$). However, these cross-sectional and longitudinal studies were variable-centered and focused on mean-level differences in victimization instead of within-person patterns of victimization over time. An exception is a recent study among a small group of LGB adolescents that identified distinct general and sexual identity victimization trajectories and showed that LGB adolescents were more likely to be persistently than decreasingly or not bullied during adolescence (Sterzing et al., 2017). A second exception showed that about 15.4% of the LGB adolescents were stable high or increasingly victimized,

whereas for 19.2% of the adolescents victimization decreased across a period of 4 years (Mustanski, Andrews, & Puckett, 2016).

The next important step is to enable a comparison between heterosexual and sexual minority adolescents and examine differences between these two groups in victimization patterns. This would help to understand whether within-person patterns of persistent victimization are more common among LGB adolescents than among heterosexual adolescents. Research on disparities in patterns of victimization, based on two waves of retrospective reports, showed that the risk of being victimized in childhood or adolescence (<18 years old) as well as adulthood was about three times higher among bisexual or lesbian women than among exclusively heterosexual women (Hughes, Johnson, Steffen, Wilsnack, & Everett, 2014). Furthermore, the findings of research on victimization patterns in exclusively LGB or exclusively heterosexual samples suggest that persistent victimization occurs in about 7% of the general adolescent population (Brendgen, Girard, Vitaro, Dionne, & Boivin, 2016; Sheppard, Giletta, & Prinstein, 2016) as compared to 15.4–28.9% of the sexual minority adolescents (Mustanski et al., 2016; Sterzing et al., 2017). Although these findings suggest elevated risks for persistent victimization among sexual minority adolescents, we aim to examine this assumption by testing differences in victimization trajectories in a general sample of adolescents.

Internalizing Problems and Victimization of LGB and Heterosexual Adolescents

Peer victimization in early and late adolescence strongly relates to the development of internalizing problems, both among LGB and heterosexual adolescents (Brendgen & Poulin, 2018; Poteat & Espelage, 2007; Robinson, Espelage, & Rivers, 2013; Thompson & Leadbeater, 2013). LGB adolescents are at increased risk for higher levels of internalizing symptoms from the period at which they start to become aware of their sexual identity, which is often late childhood or early adolescence, and the disparity in internalizing symptoms generally peaks in adolescence (e.g., Irish et al., 2019; Marshal et al., 2013).

In support of the minority stress framework (Meyer, 2003), victimization explained increased risks for (self-reported) depressive symptoms across adolescence among LGB adolescents, as shown by a recent study using the same sample as we did (La Roi et al., 2016). Moreover, stable or

increasing victimization in adolescence was associated with higher internalizing symptoms in young adulthood among LGB and transgender youth (Mustanski et al., 2016).

Despite these valuable findings, previous research has focused on associations between victimization and internalizing problems at one time point, and it is unclear how the *development* of victimization during adolescence is associated with changes in internalizing problems of LGB and heterosexual adolescents over time. Previous work has suggested that LGB adolescents might recover less quickly from the experience of victimization because they have access to fewer social resources (Pearson & Wilkinson, 2013; Williams et al., 2005). Such resources typically protect against the effects of victimization: youth who report more peer (Sainio, Veenstra, Huitsing, & Salmivalli, 2011) or parent support (Stadler, Feifel, Rohrmann, Vermeiren, & Poustka, 2010) experience less maladjustment when they are victimized. Therefore, less access to or availability of social support for LGB youth may make it more difficult for them to cope with victimization.

A person-centered approach—in which different within-person patterns of victimization are identified—would help to shed light on how developmental trajectories of victimization are differentially associated with mean-levels and change in internalizing problems for LGB and heterosexual adolescents. In other words, we examine how sexual identity predicted intercepts and slopes of internalizing symptoms across victimization trajectories.

Adolescent- and Parent-Reports

Research on LGB youth relied almost exclusively on self-report data. However, others who interact frequently with adolescents, such as parents, may provide additional observations of adolescents' peer relationships and mental health. Moreover, information about both parents' and adolescents' observations would be interesting from a family systems perspective to shed light on perceptions of parents on their child's peer interactions and internalizing symptoms, whether those observations are consistent with adolescents' self-report, and particularly what role sexual minority identity plays in potential inconsistencies between the views of parents and their children. Therefore, we examined the extent to which findings based on parent-reports of victimization and internalizing symptoms were consistent with findings obtained by adolescents' self-report.

Current Study

We aimed at taking a developmental and contextual perspective on victimization disparities between LGB and heterosexual adolescents and associated internalizing symptoms. Based on the minority stress framework (Meyer, 2003) and previous research (e.g., La Roi et al., 2016; Sterzing et al., 2017), we hypothesized (1) that LGB adolescents are at increased risk for persistent victimization compared to heterosexual adolescents. Moreover, we hypothesized (2) that persistent victimization was related to internalizing symptoms (anxiety, depressive symptoms), but more strongly among LGB adolescents than among heterosexual adolescents. These hypotheses were tested in a longitudinal sample of 2,222 adolescents of which 1,426 adolescents reported their sexual identity ($n = 151$ LGB, $n = 1,275$ heterosexual) and conducted with self- and parent-reported measures of victimization and internalizing symptoms.

METHODS

Participants and Procedure

Our study included data from the first five waves of the TRacking Adolescents' Individual Lives Survey (TRAILS). TRAILS is a prospective cohort study of Dutch adolescents, with bi- or triennial follow-up assessments. Initially, 135 schools were approached of which 122 agreed to participate. Parents were informed about the study and parents and children were asked to provide informed consent for study participation. In addition to adolescents, one of their parents also completed questions about the adolescent (95.6% mothers). Ethical approval for the study was obtained from the Dutch national ethics committee Central Committee on Research Involving Human Subjects (#NL38237.042.11), with the name of the project being "Mental health from Preadolescence into Adulthood".

We used data from the first five waves that were collected between 2001 and 2013, participants completed questionnaires biennially (wave 1: $N = 2,230$ adolescents, $M_{age} = 11.1$ ($SD = 0.56$), 51% girls; wave 2: $N = 2.149$, $M_{age} = 13.6$ ($SD = 0.53$), 51% girls; wave 3: $N = 1,816$, $M_{age} = 16.3$ ($SD = 0.71$), 52% girls; wave 4: $N = 1,881$, $M_{age} = 19.1$ ($SD = 0.60$), 52% girls; wave 5: $N = 1,778$, $M_{age} = 22.3$ ($SD = 0.65$), 53% girls). The majority of the sample had a Dutch cultural background, (86.5%), smaller groups reported having at least one parent who

was born in a non-Western country, and thus had a Surinam (2.1%), Antillean (1.7%), Indonesian or Mollucan (1.7%), Moroccan (0.7%), Turkish (0.5%), other cultural background (6.9%).

Measures

Victimization (T1, T2, T3). Victimization (T1, T2, T3) was assessed using an item on the adolescents' experiences with bullying. The item read as follows: "I am bullied a lot" (adolescents)/ "Is bullied a lot" (parent). Response options were 0 *not at all*, 1 *a little or sometimes*, and 2 *clearly or often*.

Anxiety and depressive symptoms (T1, T2, T3, T4, and T5 self-report; T1, T2, T3, T5 parent-report). The self-rated Youth Self Report (YSR) (T1–T3) and Adult Self Report (T4, T5), and the parent-rated Child Behavior Checklist (CBCL; T1–T3) and Adult Behavior Checklist (ABCL; T5) were used to assess internalizing problems (Achenbach & Dumenci, 2003; Achenbach & Rescorla, 2001). The CBCL and YSR/ASR have been developed for the multi-informant assessment of adolescents' psychopathology occurring in the previous 6 months. Informants rated descriptions of emotions and behaviors as *not present* (0) *sometimes present* (1), or *very often present* (2).

The *anxiety* scales consisted of the mean of 13 (YSR/CBCL), 18 (ASR) or 14 (ABCL) items of the Anxious/Depressed syndrome scale, for example: "I am too shy or timid" (YSR self-report) and "He/she is too shy or timid (CBCL parent -report). The items formed reliable scales of self- and parent-report, separately, α's ranging from .78 to .84 for the YSR, .78 to .81 for the CBCL, .92 and .91 for the ASR, and .90 for the ABCL.

The *depressive symptoms* scales consisted of the mean of eight (YSR/CBCL) or nine (ASR/ABCL) items of the Withdrawn/Depressed syndrome scale, for example: "There is very little that I enjoy" (YSR self-report) or "There is very little that he/she enjoys" (CBCL parent-report). The items formed internally consistent scales of self- and parent-report, separately, α's ranging from .68 to .74 for the YSR, .71 to .77 for the CBCL, .80 and .76 for the ASR, and .82 for the ABCL.

Sexual identity at T4/T5. Sexual identity at T4/T5 was measured using one item that assessed self-identified sexual identity. The question was phrased as follows: "What do you think you are? 1. Heterosexual 2. Gay/lesbian 3. Bisexual". Respondents were coded as LGB when they self-identified as gay/lesbian or bisexual in at least one wave. The sample size was too small to reliably estimate differences between LGB groups, so we collapsed the gay/lesbian category and bisexual category into one category labeled LGB. We also created a dummy variable of sexual identity that could be used as a control variable in the analyses; the dummy variable represented participants who were "inconsistent" in their self-identification as heterosexual or LGB between T4 and T5 (n = 68), versus adolescents who reported twice the same sexual identity (n = 1,358). Among inconsistent reporters, n = 41 changed from heterosexual to LGB, and n = 27 changed from LGB to heterosexual.

Demographic factors (covariates). *Biological sex* included two categories (0 = *female*, 1 = *male*), *age* was measured in years, and *ethnicity* was coded as a dummy variable (0 = both parents not born in a nontarget [nondeveloped] country and 1 = at least one parent born in a target country). Furthermore, *socio-economic status* (SES) was a scale that was calculated based on an average of *z*-scores of education (father/mother), job (father/mother), and income, collected at T1. The scale was divided into three categories (0 = lowest 25%, 1 = middle 50%, 2 = highest 25%).

Strategy of Analysis

Data-analyses were conducted in M*plus* version 7.4 (Muthén & Muthén, 2015). Figure 1 presents a conceptual model of the analyses. First, we tested the hypothesized difference between adolescents who identified as LGB versus heterosexual at T4/T5 in victimization trajectories. We used three-step latent class growth analyses (LCGA) to estimate stability and change in self-reported victimization. The three-step LCGA procedure takes the uncertainty associated with class-membership when using class-membership as the dependent variable into account (Asparouhov & Muthén, 2014), and adds the predictors (covariates) of class memberships simultaneously. In this model, the auxiliary covariates were adolescents' biological sex, age, ethnicity, SES, and LGB identity instability. The intercept of victimization was set at T3 because this time point was just before adolescents' reports of their sexual identity (T4/T5) and was, therefore, more meaningful than an intercept at T1 or T2.

Trajectories of victimization. The best-fitting class-solution was determined based on the Bayesian information criterion and sample-size

adjusted Bayesian information criterion, of which a smaller value indicates a better fit (Masyn, 2013). We also considered the Bootstrapped Likelihood Ratio Test (BLRT), the Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR), and the Lo-Mendell-Rubin Adjusted likelihood ratio test (LMR) of which a p-value of $p < .05$ indicates that the model with one less class is rejected in favor of the estimated model. Finally, the interpretability, theoretical rationale, and size of classes were used to evaluate LCGA solutions (e.g., Van de Schoot, Sijbrandij, Winter, Depaoli, & Vermunt, 2017). Ideally, these statistics would together provide consistent support for one particular trajectory model. If not, we replicated the LGCA analyses using the repeated measures latent cluster analysis (RMLCA) approach to check whether this approach resulted in the same class solution and classes. In contrast to the LCGA that assumes that growth or change over time follows a particular functional form, the RMLCA approach does not assume a particular pattern of change (Collins & Lanza, 2010; Lanza & Collins, 2006).

The role of LGB identity. The three-step LCGA procedure provides multinomial logistic regression analyses comparing class membership in one class to each other class, predicted by the covariates. We used this information to examine whether LGB identity as reported at T4/T5 distinguished membership in victimization trajectories (hypothesis 1).

In addition, we examined whether associations between victimization trajectories and internalizing problems differed between adolescents who identified as LGB versus heterosexual at T4/T5. First, we examined the main effect of LGB identity as reported at T4/T5 on mean-levels of and change in (intercept and slopes) internalizing symptoms, using multigroup latent growth models with LGB identity as reported at T4/T5 as the grouping variable. The intercept of internalizing symptoms was set at T3, which was the moment closest to the last measurement of the victimization trajectory, and
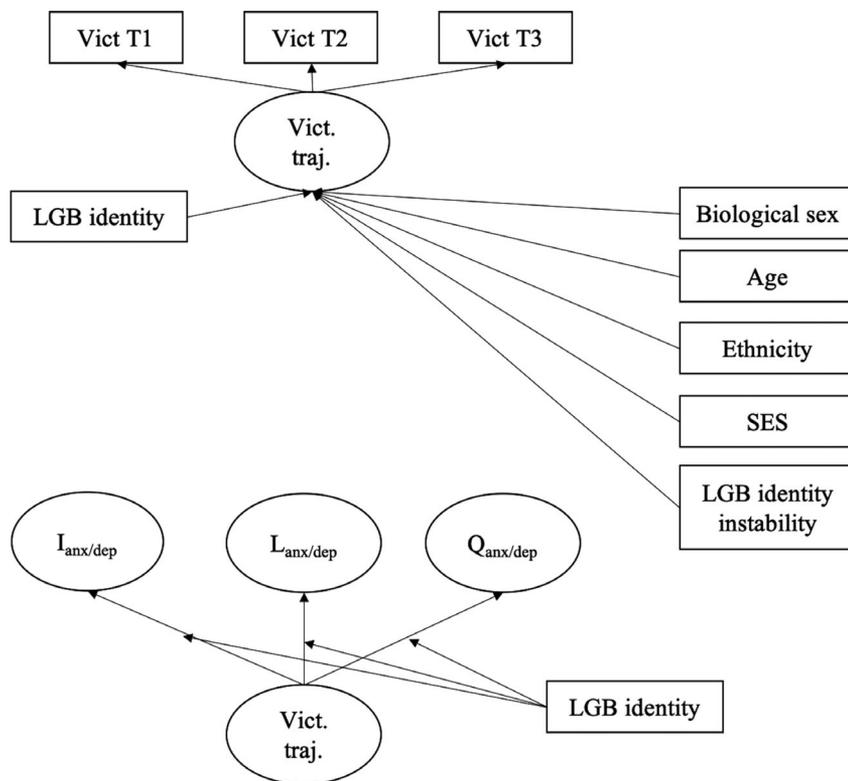
FIGURE 1   Conceptual model of analyses. The upper model represents the three-step LGCA regression model predicting effects of LGB identity on victimization (T1–T3) growth trajectories, and the lower model represents the regression model using the BCH method that compared intercepts and slopes of anxiety and depressive symptoms (T1–T5) in each victimization trajectory by LGB identity. The model was performed using self- and parent-reported information on victimization and internalizing symptoms, separately.

also a moment in which adolescents typically come out as not heterosexual (M_{age} at T3 = 16.3, SD = 0.71). Next, we estimated auxiliary regression models combined with latent class regression to examine whether LGB identity predicted the intercepts and slopes of internalizing problems across different victimization trajectories. In doing so, we used the BCH approach (Bakk & Vermunt, 2016; Bolck, Croon, & Hagenaars, 2004), which is a preferred method for estimating distal outcomes because it uses weights ϖ_{ij}, reflecting the measurement error of the latent trajectory. This method is preferred because it predicts distal outcomes with less error than the classify-analyze approach using most likely class membership (Asparouhov & Muthén, 2014; Collier & Leite, 2017). In order to gain a comprehensive view of the effects we investigated these effects separately for depressive symptoms and anxiety.

Furthermore, to examine whether parent-reports showed similar patterns, we replicated the analyses using parent-reported measures of victimization and internalizing symptoms. First, we examined parent-reported victimization patterns and the role of LGB identity as a predictor. Second, we examined whether LGB identity predicted associations between victimization trajectories and parent-reported internalizing symptoms. In this step, we estimated the victimization trajectories based on self-report instead of parent-report, so we could compare reports of both informants on the same trajectories. To interpret differences between adolescent- and parent-reported estimates, we compared the confidence intervals estimated in these models.

In all models, we used maximum likelihood estimation with robust standard errors (MLR) which is robust to violations of normality. Missing data were handled using Full Information Maximum Likelihood estimation, data presence ranged from .73% (T3) to .98% (T1) for victimization, .90% (T3) to .99% (T1) for anxiety and .89% (T3) to .99% (T1) for depressive symptoms. We accounted for clustering at the school-level, which was assessed at T1. The intraclass correlations ranged from .00 (depressive symptoms, T4) to .03 (victimization, anxiety and depressive symptoms, T3).

RESULTS

Preliminary Analyses

Table 1 shows the descriptive statistics of the variables and associations over time. Independent t-

TABLE 1
Descriptive Statistics of the Key Variables across Adolescents (n = 151 LGB, n = 1,275 Heterosexual)

Predictor	T1 LGB M (SD)	T1 Hetero M (SD)	T2 LGB M (SD)	T2 Hetero M (SD)	T3 LGB M (SD)	T3 Hetero M (SD)	T4 LGB M (SD)	T4 Hetero M (SD)	T5 LGB M (SD)	T5 Hetero M (SD)
Victimization										
Self-report	0.58[a] (0.69)	0.35 (0.56)	0.32 (0.57)	0.18 (0.43)	0.20[a] (0.47)	0.06 (0.25)	—	—	—	—
Parent-report	0.44 (0.60)	0.32 (0.54)	0.21 (0.45)	0.15 (0.39)	0.21 (0.45)	0.09 (0.33)	—	—	—	—
Anxiety										
Self-report	0.24 (0.29)	0.33 (0.27)	0.42[a] (0.40)	0.32 (0.29)	0.42[a] (0.40)	0.29 (0.28)	0.46[a] (0.41)	0.31 (0.32)	0.49[a] (0.46)	0.30 (0.32)
Parent-report	0.30 (0.23)	0.28 (0.25)	0.24 (0.24)	0.19 (0.22)	0.26[a] (0.26)	0.17 (0.22)	—	—	0.31[a] (0.34)	0.22 (0.29)
Depression										
Self-report	0.40 (0.33)	34 (0.28)	0.42 (0.33)	0.35 (0.29)	0.52[a] (0.40)	0.36 (0.31)	0.30 (0.33)	0.22 (0.26)	0.35[a] (0.37)	0.22 (0.27)
Parent-report	0.30[a] (0.31)	0.25 (0.26)	0.29[a] (0.28)	0.23 (0.27)	0.36[a] (0.32)	0.24 (0.29)	—	—	0.24[a] (0.29)	0.16 (0.25)
Age	11.17 (0.59)	11.07 (0.55)	13.58 (0.55)	13.51 (0.52)	16.31 (0.70)	16.21 (0.65)	19.10 (0.61)	19.00 (0.56)	22.31 (0.69)	22.23 (0.64)

Note. Hetero, heterosexual; LGB, lesbian, gay, bisexual.
[a]Significant difference between LGB and heterosexual adolescents ($p < .05$).

tests showed several differences in key variables between adolescents who identified as LGB and heterosexual at T4/T5. Specifically, adolescents who identified as LGB at T4/T5 reported more victimization at T1 and T3, reported more anxiety at T2, T3, T4, and T5, and more depressive symptoms at T3 and T5, compared to adolescents who identified as heterosexual at T4/T5. Parents of adolescents who identified as LGB at T4/T5 also reported more anxiety at T3 and T5 and more depressive symptoms in their children at all waves, compared to parents of adolescents who identified as heterosexual at T4/T5. Overall, correlations of victimization with anxiety and depressive symptoms were moderate and positive, for adolescents who identified as heterosexual or as LGB at T4/T5, see Table S1.

Trajectories of Victimization

We estimated fit indices for the victimization trajectory models (Table 2) using the three-step approach. Although fit-statistics VLMR and LMR indicated a better fit for a one-class model than a multigroup model, the BLRT, BIC and aBIC indicated a better fit for the two-class model. Further, a three-class model was preferred over a two-class model based on the decreased BIC and aBIC values and significant VLMR, LMR, BLRT. Although adding a fourth trajectory would further improve the model, indicated by the lower BIC and aBIC values compared to the three-class model and the significant BLRT value, the VLMR and LMR indicated no improvement by adding a fourth trajectory, and this model would also lead to very small classes. Taken together, the four-class model might result in inaccurate estimates of trajectories and fails to meaningful group comparisons between LGB and heterosexual youth (Depaoli,

2013). In the five- to six-class models, there were empty trajectory classes that did not make statistical or theoretical sense and these classes were also not supported by the BLRT, VLMR, and LMR. Thus, we moved forward with the three-class model to ensure a reliable interpretation of the findings. In addition, we conducted RMLCA's to check the validity of the three-class model, and these results also showed support for the three-class model involving a persistently, decreasingly and nonvictimized class (see Appendix S3 for details).

The three trajectories (Figure 2) represented classes ("groups") of adolescents who reported stable high (persistent) victimization (5.6%), decreasing victimization (28.1%) or low/no (66.3%) victimization.

Predictors of Victimization Trajectories

With three-step multinomial logistic regression analyses, we examined whether sexual identity distinguished membership in victimization trajectories when controlling for adolescents' biological sex, age, ethnicity, SES, instability in sexual identity between T4/T5, and for nesting at the school level (hypothesis 1; see Table 3). LGB identity as reported at T4/T5 (LGB vs. heterosexual) differentiated victimization from nonvictimization: adolescents who identified as LGB at T4/T5 were more likely to be victimized, both persistently (OR = 6.79, 95% CI [3.58, 12.90]) and decreasingly (OR = 2.20, 95% CI [1.29, 3.75]), than adolescents who identified as heterosexual at T4/T5. Moreover, adolescents who identified as LGB at T4/T5 were also more likely to be persistently rather than decreasingly victimized (OR = 3.09, 95% CI [1.53, 6.24]) than adolescents who identified as heterosexual at T4/T5.

TABLE 2
Fit Statistics for Latent Cluster Growth Analyses on Victimization

	Entropy	BIC	Adj. BIC	BLRT	VLMR	LMR	Min-Max N
1 class	–	4,575.4	4,540.5	–	–	–	–
2 classes	.95	3,286.5	3,261.1	<.001	.39	.40	160–2,062
3 classes	.97	2,511.6	2,476.6	<.001	.01	.01	124–1,473
4 classes	.98	1,677.2	1,632.7	<.001	.15	.16	48–1,473
5 classes	.99	1,194.6	1,140.6	1	.50	.50	0–1,473
6 classes	.98	231.8	168.3	–*	.47	.47	0–1,809

Note. BIC, Bayesian Information Criterion; BLRT, Bootstrapped Likelihood Ratio Test; VLMR, Vuong-Lo-Mendell-Rubin likelihood ratio test; LMR, Lo-Mendell-Rubin adjusted likelihood ratio test.
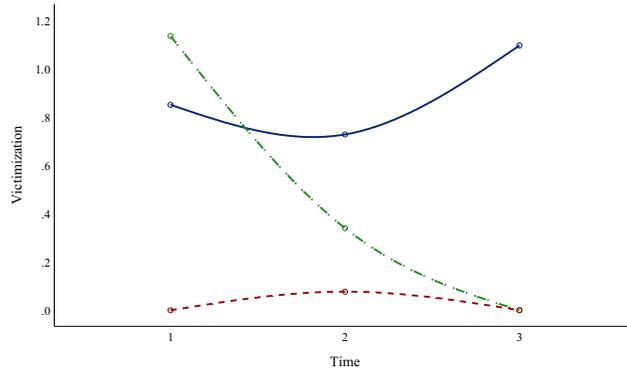*p-Value not trustworthy because of local maxima.

FIGURE 2   Graphic representation of the victimization trajectories reported by adolescents. Lines represent the persistent victimization trajectory (5.6%, solid line), the decreasing victimization trajectory (28.1%, dotted-dashed line) and the nonvictimized trajectory (66.3%).

LGB at T4/T5 increased in anxiety whereas adolescents who identified as heterosexual at T4/T5 decreased. Furthermore, adolescents who identified as LGB at T4/T5 decreased more slowly in depressive symptoms than adolescents who identified as heterosexual at T4/T5. Thus, adolescents who identified as LGB at T4/T5 were worse off in their changes in internalizing symptoms than adolescents who identified as heterosexual at T4/T5.

We also examined whether LGB identity at T4/T5 predicted differed intercepts and slopes of internalizing symptoms across victimization trajectories. Table 4 presents the descriptive growth statistics per victimization trajectory in the overall sample, and Table 5 reports the regression coefficients using LGB identity as a predictor of these intercepts and slopes. Positive regression coefficients of LGB identity in Table 5 refer to the direction of the effect reported in Table 4 being stronger for adolescents who identified as LGB at T4/T5. Results of regression models using the BCH method showed that LGB identity as reported at T4/T5 predicted several different associations between victimization trajectories and patterns of internalizing symptoms. In the persistently victimized trajectory (Tables 4 and 5, column set 1), adolescents who identified as LGB at T4/T5 reported higher mean-levels of anxiety and increased more quickly in anxiety, $R_i^2 = .08$, slope $R_S^2 = .10$. Furthermore, in the nonvictimized trajectory (Tables 4 and 5, column set 3), adolescents who identified as LGB at T4/T5 reported higher mean-levels of anxiety and depressive symptoms and linearly decreased more quickly in anxiety ($R_i^2 = .01$, slope $R_1^2 = .01$) and

Development of Internalizing Problems Across Victimization Trajectories

Using latent growth modeling, we examined internalizing problems among adolescents being predicted by LGB identity at T4/T5 across victimization trajectories (hypothesis 2). First, with a multigroup model (LGB = group) we estimated the main effect of LGB identity as reported at T4/T5 by examining mean-levels of and change in (intercept and slopes) internalizing symptoms for those who identified as LGB and those who identified as heterosexual, separately (Table S2). Linear slopes of anxiety and depressive symptoms were different across LGB versus heterosexual youth as reported at T4/T5. Adolescents who identified as

TABLE 3
Predictions of Victimization Trajectories Across Adolescence by LGB Status

| Predictor | Persistent versus Nonvictimized | | | Persistent versus Decreasing | | | Decreasing versus Nonvictimized | | |
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
LGB identity	6.79	3.52–13.13	<.001	3.09	1.53–6.24	<.001	2.20	1.30–3.72	.00
Biological sex	1.33	0.83–2.13	.23	1.14	0.68–1.91	.61	1.17	0.91–1.50	.22
Age	0.85	0.58–1.24	.40	1.02	0.66–1.58	.93	0.83	0.66–1.07	.14
Ethnicity	0.50	0.17–1.49	.21	0.57	0.18–1.75	.33	0.88	0.55–1.39	.57
SES	0.55	0.39–0.77	.00	0.84	0.59–1.19	.33	0.66	0.56–0.77	.00
LGB identity instability	0.29	0.20–0.40	.02	0.53	0.17–1.72	.26	0.53	0.27–1.05	.07

Note. Results from three-step latent class growth analysis, accounted for clustering (school). Regression coefficients were transformed to odds ratios to aid the interpretation of results. LGB refers to heterosexual (reference) versus lesbian, gay or bisexual as reported at T4/T5; biological sex refers to male (reference) versus female; ethnicity represents Dutch (reference) versus non-Dutch; LGB identity instability refers to the same self-reported sexual identity across T4 and T5 (reference) versus changes in self-reported sexual identity across these waves.
LGB, lesbian, gay, and bisexual.

TABLE 4
Standardized Growth Statistics of Latent Growth Models of Anxiety and Depressive Symptoms in Each Victimization Trajectory Class

Average	Persistent			Decreasing			Non-victimized		
	I [95% CI]	L [95% CI]	Q [95% CI]	I [95% CI]	L [95% CI]	Q [95% CI]	I [95% CI]	L [95% CI]	Q [95% CI]
Anxiety									
Self-report	2.33***	0.14	−0.23	1.79***	−0.23***	0.34***	1.30***	−.09**	0.22***
	[1.90, 2.76]	[−0.11, 0.39]	[−0.56, 0.10]	[1.66, 1.92]	[−0.35, −0.10]	[0.23, 0.45]	[1.23, 1.38]	[−.16, −.03]	[0.16, 0.29]
Parent−report	2.01***	0.05	2.04***	1.34***	−0.32***	1.69***	0.99***	−.34***	1.48***
	[1.68, 2.33]	[−0.23, 0.33]	[1.76, 2.32]	[1.22, 1.45]	[−0.44, −0.19]	[1.56, 1.82]	[0.92, 1.05]	[−.41, −27]	[1.40, 1.56]
Depressive symptoms									
Self−report	2.73***	−0.81***	−1.54***	2.04***	−1.05***	−0.52***	1.54***	−.72***	−0.61***
	[2.36, 3.11]	[−1.07, −0.55]	[−1.90, −1.18]	[1.91, 2.17]	[−1.19, −0.91]	[−0.63, −0.40]	[1.46, 1.62]	[−.80, −55]	[−0.67, −0.55]
Parent−report	2.01***	−0.14	−0.54***	1.34***	−0.46***	−0.47***	0.99***	−.43***	−0.39***
	[1.68, 2.33]	[−0.42, 0.14]	[−0.84, −0.25]	[1.22, 1.46]	[0.58, −0.34]	[−0.59, −0.36]	[0.93, 1.05]	[−.52, −35]	[−0.46, −0.33]

Note. LGB self/parent-report refers to heterosexual (reference) versus lesbian, gay or bisexual. Cubic growth terms were tested, but did not improve the model fit.
I, intercept; L, linear slope, Q, quadratic slope.
$*p < .05$, $**p < .01$, $***p < .001$.

TABLE 5
Standardized Regression Effects of LGB Status on Relationship Between Victimization Trajectory Classes and Growth Statistics Using BCH Approach

Predictor	Persistent			Decreasing			Nonvictimized		
	I [95% CI]	L [95% CI]	Q [95% CI]	I [95% CI]	L [95% CI]	Q [95% CI]	I [95% CI]	L [95% CI]	Q [95% CI]
Anxiety									
LGB self-report	.28* [.03, .52]	.31* [.04, .59]	−.14 [−.42, .13]	.09 [−.03, .22]	.03 [−.08, .14]	−.08 [−.21, .05]	.10* [.02, .17]	.13** [.05, .20]	.02 [−.04, .09]
LGB parent−report	−.17 [−.40, .06]	.02 [−.18, .23]	−.19† [−.39, .01]	.06 [−.04, .16]	.01 [−.10, .13]	−.04 [−.15, .07]	.10* [.02, .17]	.09† [.01, .18]	.08* [.01, .15]
Depressive symptoms									
LGB self−report	.10 [−.18, .38]	.10 [−.18, .39]	.08 [−.21, .37]	.06 [−.06, .18]	.01 [−.09, .12]	−.08 [−.19, .03]	.12** [.04, .20]	.10** [.03, .16]	−.06† [−.13, .01]
LGB parent−report	−.17 [−.40, .06]	−.04 [−.29, .20]	−.01 [−.27, .24]	.06 [−.04, .16]	.02 [−.11, .15]	−.06 [−.20, .07]	.10* [.02, .17]	.04 [−.03, .11]	−.01 [−.08, .05]

Note. LGB refers to heterosexual (reference) versus lesbian, gay or bisexual.
I, intercept; L, linear slope, Q, quadratic slope.
$*p < .05$, $**p < .01$, $***p < .001$, $†p < .08$.

depressive symptoms ($R_i^2 = .02$, slope $R_1^2 = .01$) over time.

Parent-Reports of Victimization and Internalizing Symptoms

Appendices S1 and S2 provide detailed results of the analyses using parent-reports of victimization and internalizing symptoms. Overall, the results of the three-step method LCGA analyses using parental or self-reports of victimization showed that the three-class model showed comparable trajectories. These trajectories represented groups of adolescents who reported stable high (persistent) victimization (7.0%), decreasing victimization (25.3%) and low/no victimization (67.7%; Figure S1). Furthermore, comparable to the findings when using self-reports of victimization, based on parent-reports, adolescents who identified as LGB at T4/T5 were more likely to be persistently victimized than not victimized (Table S4). Parent-reports did not provide the differences between persistent and decreasing victimization, or decreasing and nonvictimization, that were found when using self-reports of victimization. Furthermore, parent-reports of internalizing symptoms showed that parents underestimated overall mean levels of internalizing symptoms and did not report more anxiety in the persistently victimized class that adolescents reported (Tables 4 and 5).

DISCUSSION

This study examined whether LGB adolescents were at higher risk for persistent, long-lasting victimization compared to heterosexual adolescents and whether victimization was associated with internalizing problems over time. Even when controlling for various demographic characteristics, the proportion of LGB adolescents who experienced persistent victimization from early to late adolescence was higher than this proportion among heterosexual adolescents. Furthermore, for some LGB adolescents, victimization reduced over time; however, the proportion of "decreasers" was smaller among LGB than among heterosexual adolescents. Thus, LGB adolescents were much less likely to escape victimization once it started than heterosexual adolescents were. In addition, LGB adolescents who were persistently victimized experienced higher internalizing problems than heterosexual youth, mainly in terms of anxiety. Moreover, analyses using parent-reports of victimization showed that parents also observed elevated risks for persistent victimization among LGB adolescents. However, they did not observe higher levels of anxiety among persistently victimized LGB adolescents.

Persistent Victimization in LGB Adolescents

Our findings suggest that LGB adolescents are not only more likely to be victimized (e.g., La Roi et al., 2016), but they are also more likely to be victimized for a prolonged period of time. Our study showed that when LGB adolescents are victimized at age 11, victimization is more likely to continue into late adolescence than to decrease. Furthermore, LGB adolescents are more likely to experience persistent victimization during adolescence than heterosexual adolescents.

What could explain the higher risk for persistent victimization in LGB adolescents? As already suggested by the minority stress framework (Meyer, 2003), LGB adolescents remain a minority in their peer group and the larger society, throughout adolescence and in adulthood. For heterosexual adolescents, victimization may decrease or stop when they move into a different context (classroom, college) and might find a new peer group in their new environment. LGB youth often risk victimization in different contexts because their (marginalized) minority position remains. In addition, LGB adolescents' frequent experiences with rejection by their parents, peers, and teachers (Chesir-Teran, 2003; Pearson & Wilkinson, 2013; Williams et al., 2005) might characterize the vulnerability for such persistent victimization (Bowes et al., 2013; Brendgen & Poulin, 2018). Peers who intervene when youth are victimized can decrease the rewards for bullies and stop the bullying, but without such support, victimization is more likely to continue. In line with this, parents and other important adults such as teachers have a key position in noticing and taking an active stance against victimization (Baams, Dubas, & van Aken, 2017; Espelage, Aragon, Birkett, & Koenig, 2008).

Furthermore, although LGB adolescents were more likely to be persistently victimized, for some LGB adolescents victimization did decrease during adolescence or they were not victimized at all. What might differentiate these latter two groups of adolescents from persistently victimized LGB adolescents? First, the school context may play an important role (Sterzing et al., 2017). Youth for whom victimization decreased may have received opportunities to go to a school or college that provided a safer and more accepting social climate.

Furthermore, youth's experiences with coming out may also determine differential victimization patterns. Many LGB youth might have been going through initial stages of disclosing their sexual orientation to others while they participated in the study, and disclosing their sexual orientation to others may have elicited negative reactions and continued victimization (Ryan et al., 2015). For other adolescents, coming out may have led to *improved* social connections with and support from, others: peers, parents, LGB peers or the LGB community. Further research on within-group differences is relevant to examine the factors that differentiate between LGB youth who are persistently rather than decreasingly victimized.

Associations Between Victimization and Internalizing Problems

We also found that the associations between victimization trajectories and internalizing symptoms, specifically anxiety, differed across LGB and heterosexual adolescents. Most centrally, our results suggest that persistently victimized LGB adolescents had higher mean levels of anxiety and had higher levels of anxiety across waves, compared to heterosexual adolescents. These results may point toward a stronger impact of persistent victimization in LGB adolescents, which might again be explained by their lack of social support from peers or parents at the time of victimization. These close relationships might help to alleviate the effects of victimization on self-blame or fears about future problems (Espelage et al., 2008; Hodges, Boivin, Vitaro, & Bukowski, 1999; Sainio et al., 2011; Stadler et al., 2010). Whereas heterosexual youth may be more likely to find emotional support in relationships beyond the context in which victimization takes place, this might be more difficult for LGB adolescents because they may experience victimization across different contexts. Notably, the earlier described processes particularly pertain to anxiety patterns, as there were no effects on mean-levels or patterns of depressive symptoms in the persistently victimized trajectory. This might reflect a ceiling effect, as mean levels of depressive symptoms were already relatively high in the persistently victimized group. Alternatively, it could be that for LGB adolescents, persistent victimization mostly contributes to anxious, instead of somber, thoughts. The findings of neurobiological and psychological research have suggested that individuals who underwent social exclusion or (ethnic) discrimination experience more social

threat or stress, because they anticipate on future rejection, which relates to anxiety rather than somberness (Sawyer, Major, Casad, Townsend, & Mendes, 2012; Williams & Mohammed, 2009). In addition, among adolescents who were decreasingly victimized, we did *not* observe differences in internalizing symptoms between LGB and heterosexual youth. LGB adolescents who were decreasingly victimized may thus have recovered in similar ways from past victimization as heterosexual adolescents did. Last, whereas LGB adolescents were generally worse off than heterosexual adolescents in terms of internalizing problem patterns, when only focusing on the nonvictimized population of LGB adolescents, LGB youth declined more quickly in anxiety and depressive symptoms when moving into adulthood as compared to heterosexual adolescents.

Parent-Reports of Adolescents' Victimization and Internalizing Symptoms

The parent-reported information in our study sheds light on parents' observations of victimization and internalizing symptoms in their children. Parents of persistently victimized LGB adolescents observed three times more persistent victimization in their children than parents of heterosexual adolescents. This replicated adolescents' own observations, although the disparities were smaller in size than in the adolescent-reported data. Furthermore, parents did not observe elevated risks among LGB youth to be persistently victimized as compared to decreasingly victimized, or to be decreasingly rather than not victimized, and parents reported less internalizing symptoms in their children. The clearest inconsistency between adolescent- and parent-reports regarded the group of persistently victimized LGB adolescents, for whom parents reported lower mean levels and less change in anxiety over time.

The underreport by parents of victimized LGB youth might be explained by the lower levels of support that LGB youth might receive from their parents which make it less likely that parents detect LGB youth's problems (Pearson & Wilkinson, 2013). Youth with lower-quality parent-child relationships are less likely to be inquired about their personal experiences by their parents and are also less comfortable sharing their problems with them (Goodman, Reyes, & Bradshaw, 2010; Unnever & Cornell, 2004). Moreover, some LGB youth may have a lower tendency to share their experiences with victimization or related internalizing

problems with their parents to avoid "outing" themselves—when victimization was related to their sexual orientation, sharing this with their parents may inadvertently signal their sexual orientation to their parents. The inconsistency between adolescent- and parent-reports is problematic because our study indicates that especially these adolescents experience the most serious adjustment and peer problems, and important figures such as their parents should be aware of these problems and provide them support. Overall, our study indicates that parent-reports of LGB adolescents' health may be especially valuable to inform us of *discrepancies* between adolescent-parent perceptions, instead of valid sources of adjustment (Goodman et al., 2010).

Limitations and Future Directions

This study took a longitudinal perspective on disparities in victimization between LGB and heterosexual youth and relied on self- and parent-reported information of victimization and internalizing symptoms, using a developmental framework that spanned over a decade (from 11 to 22 years old). Using a population-based sample and decreasing shared method variance, we were able to detect disparities in persistent victimization and to examine associations with internalizing problems. Despite the insights gained, this study also has limitations.

First, not all measures were assessed at all time points. Specifically, victimization was assessed only until late adolescence (not at T4 and T5). Therefore, we could not shed light on disparities in victimization trajectories into adulthood, but only until adolescents were on average 16 years old. LGB adolescents' victimization may decrease when they move into adulthood, as they enter or select more accepting environments where they might find more support (Birkett, Newcomb, & Mustanski, 2015). There was also no measure of parent-reported internalizing symptoms available at T4; however, we had a measure of parent-reported internalizing problems at T5. In addition, sexual identity was assessed in T4 and T5 only, and some youth may not have experienced minority-related stressors before this period, which was the period in which we assessed victimization. Therefore, our findings may present an underestimation of the problems experienced by LGB youth.

Second, our sample was too small to reliably test differences in other potentially important factors such as gender or sexual identity groups, for example between LGB youth (Birkett et al., 2015; La Roi et al., 2016). The small sample size may also have affected the reliability of our findings in smaller (victimized) groups than in larger (nonvictimized) groups, and therefore we may have underestimated the effects in the victimized groups of adolescents. To enable analyses of different subgroups and increase reliability, larger samples are needed and therefore we recommend researchers who study victimization or effects of anti-bullying interventions in the larger population to include measures of sexual orientation (Toomey et al., 2016).

Third, our measure of victimization was not optimal. We used single items that were largely collected within other constructs and the items did not define bullying. Researchers have argued that single-item measures can be useful (Solberg & Olweus, 2003), but multiple-item assessments of victimization are usually found to be more reliable and objective (Huang & Cornell, 2015). Some researchers have examined the impact of using single-item measures, showing that single-item measures result in lower estimates of victimization (Huang & Cornell, 2015; Thomas, Connor, & Scott, 2015). However, this underestimation should not have influenced the results with regard to disparities between LGB and heterosexual adolescents. Furthermore, analyses using parent-reported victimization resulted in the same trajectories (persistent, decreasing, nonvictimized), which lends support for the validity of our single-item measure. Another potential limitation of our measure of victimization was that it did not focus on sexuality-related victimization (or minority stress). However, although LGB adolescents' sexual identity predicts victimization, the LGB identity may not always be the direct motivation for being bullied. In some types of victimization, the motivation for bullying may be more ambiguous, such as being excluded from social events (Kaufman, Baams, & Dubas, 2017). In addition, perpetrators of victimization may not be aware of the sexual identity of their victims, but target these youth because they exhibit behaviors that are associated with their minority identity and make them an easy target for victimization, such as internalizing symptoms or gender expression (La Roi et al., 2016; Toomey et al., 2014). For these reasons, we deem the lack of focus on sexuality-related victimization not problematic, although examining minority stress in addition to nonbias based bullying might be a good focus for further research.

Finally, our study was conducted in the Netherlands, where societal attitudes toward sexual and gender diversity are relatively positive compared to other European countries (Kuyper, Iedema, & Keusenkamp, 2013). It is possible that disparities are larger in other socio-political climates. For example, 16% of LGB adolescents in our sample followed a persistent victimization trajectory. In a smaller US-based sample, this percentage was, however, 28.9% (Sterzing et al., 2017).

Implications

The findings of this study may have several implications for school practice and policy, although these implications should be interpreted with caution given the small sample size of our study. First, our findings call for awareness that LGB adolescents are overrepresented in the population of persistently victimized adolescents. As such, schools should consider targeted programs and policies that help LGB adolescents to escape victimization before it becomes persistent. These might include implementation of Gay-Straight Alliances in schools to provide peer networks for LGB youth and their allies (Russell, Muraco, Subramaniam, & Laub, 2009). In addition, training of school personnel about ways to intervene in harassment of LGB youth might help to prevent victimization from becoming persistent. These programs and policies might already be effective at an age at which adolescents have not disclosed their sexual orientation to others, because victimization based on sexual orientation and gender nonconformity begins as early as elementary school (GLSEN & Harris Interactive, 2012; Martin-Storey & Fish, 2019).

CONCLUSIONS

The findings of our study highlight the marginalized position of LGB youth during adolescence and moving into young adulthood. The finding that LGB adolescents are at increased risk to be victimized for multiple years is particularly alarming, because long-lasting victimization may interfere with the development of social relationships and sexual identity, which are central in this life phase. Future research might seek to identify factors that explain the disparities between LGB and heterosexual adolescents, such as supportive relationships. Such knowledge could help identify target spots for anti-bullying interventions, which should consider LGB adolescents as a particularly vulnerable group and at the same time recognize that some

LGB adolescents succeed in recovering from periods of victimization. Further research may also focus on the factors that differentiate persistently victimized youth from those who escape from victimization, such as outcomes of disclosing ones sexual orientation or changes in environmental factors. Overall, our findings call for awareness that LGB adolescents are overrepresented in the population of persistently victimized adolescents, and for early strategies to tackle victimization before it becomes persistent.

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Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Table S1. Pearson intercorrelations among study variables (n = 151 LGB, n = 1,275 heterosexual adolescents).

Table S2. Standardized growth statistics of latent growth models of depressive symptoms and anxiety across LGB groups.

Appendix S1. Internalizing symptoms using parent-reports.

Appendix S2. Victimization trajectories using parent-reports of victimization.

Table S3. Fit statistics for latent cluster growth analyses on parent-reported victimization.

Table S4. Predictions of victimization trajectories across adolescence by LGB status using parent-reports of victimization.

Figure S1. Graphic representation of the trajectories of victimization as reported by parents about their children (N = 151 LGB, N = 1,275 heterosexual).

Appendix S3. Sensitivity analyses of adolescent-report LCGA using RMLCA approach.

Table S5. Fit statistics for repeated measures latent cluster analyses on victimization.

Table S6. Estimated probabilities for repeated measures latent cluster analyses on victimization across three levels of victimization measure.

Table S7. Predictions of victimization trajectories across adolescence by LGB status.

Table S8. Fit statistics for repeated measures latent cluster analyses on parent-reported victimization.

Table S9. Estimated probabilities for repeated measures latent cluster analyses on victimization across three levels of parent-reported victimization measure.

Table S10. Predictions of parent-reported victimization trajectories across adolescence by LGB status.

Figure S2. Graphic representation of the repeated measures LCA classes of victimization reported by adolescents (N = 151 LGB, N = 1,275 heterosexual).

Figure S3. Graphic representation of the repeated measures LCA classes of victimization as reported by parents (N = 151 LGB, N = 1,275 heterosexual).