

Bullying involvement and the transition to high school: A brief report

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Abstract

School transitions are common educational experiences for children and adolescents and many of them worry about being bullied during this type of major life-changing point. In a sample of 701 Canadians assessed yearly from grade 5 (age 10) to grade 12 (age 18), we examined heterogeneous patterns of bullying involvement while statistically accounting for the transition into high school. Gender differences were also examined. Results indicated that on average, bullying victimization declined over time with a significant drop noted between grade 8 and grade 9 (the transition into high school), with few differences between girls and boys. Bullying perpetration also declined for most students (no gender differences), with a notable drop found at the transition into high school. However, for a subset of adolescents, the transition into high school was accompanied by an increase in bullying perpetration. These varied experiences highlight the need to model heterogeneity when examining the impact of school transitions on bullying, a neglected focus of inquiry to date. Our results suggest that moving into high school is beneficial for most adolescents involved in bullying, but not for all.

KEYWORDS

bullying perpetration, bullying victimization, gender differences, heterogeneity, longitudinal study

1 | INTRODUCTION

School transitions are an important, almost universal educational experience for children and adolescents (henceforth youth; UNICEF, 2021). In most countries, youth transition either directly from elementary school into high school (i.e., secondary school) or from elementary school to middle school and then into high school, which typically begins in grade 8 (G8) or G9 (age 13–14; UNICEF, 2021). School transitions are associated with a host of changes for youth, including increased academic expectations and demands, larger classes, bigger schools, shifts in peer group

compositions and hierarchies, and less adult supervision and influence (e.g., Wójcik & Hełka, 2019). School transitions are also associated with worries about peer relations, belonging, and mental well-being (Spernes, 2022). One notable area of concern for youth making the transition into a new school is bullying (e.g., Lucey & Reay, 2000; Rice et al., 2011; Zeedyk et al., 2003). Bullying is a widespread phenomenon affecting approximately 30% of youth worldwide (Biswas et al., 2020). Bullying entails repeated, intentional negative behavior directed at a person who wields less power than their abuser (Olweus, 1996). The negative behavior takes many forms, such as verbal, physical, social/relational, and cyber. Being the

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target of bullying is associated with mental and physical health problems (McDougall & Vaillancourt, 2015), as well as academic difficulties (Laith & Vaillancourt, 2022) that affects the individual immediately and in the long term. Perpetrators of bullying are also at risk for these types of adjustment issues (Copeland et al., 2013; Lösel & Bender, 2011; Ttofi et al., 2012).

Bullying can be examined using Bronfenbrenner's (1979) Ecological Systems Theory. Involvement as a target or perpetrator can be shaped by a series of nested systems ranging from individual characteristics (e.g., gender, personality) and immediate environments (e.g., home, school) to distal cultural norms (Hong & Espelage, 2012). One important ecological factor for bullying involvement includes school transition. A positive school transition is important for the social, emotional, and academic development of youth. A positive transition would include a reduction in the involvement with bullying. Although there are intervention programs designed to target bullying specifically during school transitions (Cross et al., 2018; Wójcik & Hełka, 2019), little is in fact known about how school transitions per se impact bullying victimization and perpetration rates. Moreover, what little we do know about this topic is challenged by methodological flaws that have not permitted a true examination of this near-universal major life-changing point. Specifically, researchers have not examined change during school transitions using statistical approaches that account for intraindividual heterogeneity (i.e., distinct developmental trajectories) while formally examining the statistical impact of the transition on distinct trajectories (i.e., how transition changes these trajectories). Rather, change has typically been assessed by comparing rates after the transition to rates before the transition. For example, using repeated-measures analysis of variance, Pellegrini and Bartini (2000) and Pellegrini and Long (2002) found that for youth who transitioned from elementary school to middle school (G5–G6), rates of bullying perpetration increased while rates of bullying victimization decreased. Farmer et al. (2011) compared the experiences of youth who did and did not change schools from G5 to G6 using χ^2 analyses and found that higher proportions of youth who did not transition were involved in bullying victimization and perpetration than youth who did transition. Using multilevel regression analyses, Wang et al. (2016) found that the transition from elementary school to middle school (G5–G6) was associated with decreases in bullying victimization for girls, but not for boys who transitioned, and no differences were found for rates of bullying perpetration. In a cross-sectional study, Pepler et al. (2006) found that students' reports of bullying perpetration were highest after the transition into high school and the rates were higher for boys than for girls. Finally, in a study examining the heterogeneity in bullying perpetration across the transition from elementary school to middle school (G5–G6), Espelage et al. (2015) found four clusters: (1) a decreasing group (18.6%), (2) a moderate increasing group (10.5%), (3) a high increasing group (4.6%), and (4) a low stable group (61.6%). The decreasing bullying perpetration group also experienced less bullying victimization in the transition to middle school. There were more girls than boys in the low stable group and more boys than girls in the

decreasing and increasing groups. In this study, the statistical impact of school transition was not examined directly.

1.1 | Current study

We examined how the transition into high school impacted bullying victimization and perpetration rates using an innovative analytic strategy that allowed us to examine heterogeneous patterns of bullying across 8 years of development, while also statistically accounting for this major life-changing point. We accounted for school transition by using discontinuity latent growth curves that incorporated an "event" (Rioux et al., 2021). This analytic "event" permitted us to explicitly examine the extent to which bullying trajectories may have shifted due to the high school transition (Rioux et al., 2021). We expected that the average rate of change would increase for bullying victimization and perpetration before the transition, then decrease after the transition, reflecting developmentally normative increases in bullying during childhood and declines in adolescence (Scheithauer et al., 2006; Smith et al., 1999).

We also examined heterogeneity by conducting latent class growth analyses (LCGA) with the event to examine if there were groups of youth following similar patterns of bullying victimization or perpetration before and after the transition into high school. Based on past research examining distinct trajectories of bullying victimization (Brendgen et al., 2016; Geoffroy et al., 2018; Goldbaum et al., 2003) and perpetration (Espelage et al., 2018; Pepler et al., 2008; Reijntjes et al., 2013), we expected to identify the following groups: (1) stable low bullying victimization and perpetration groups, (2) moderate decreasing victimization and perpetration groups, with steeper declines in high school than elementary school, and (3) stable high bullying victimization and perpetration groups. We also anticipated (4) increasing bullying involvement in elementary school and then decreasing involvement in high school based on past trajectory studies (Brendgen et al., 2016; Espelage et al., 2018; Pepler et al., 2008). Given evidence that boys are more involved in bullying than girls (Scheithauer et al., 2006; Smith et al., 2019) and that school transitions differentially impact boys and girls (Pepler et al., 2006; Wang et al., 2016), we explored the moderating role of gender. Race/ethnicity and socioeconomic status were controlled for in our analyses because of differences in bullying rates across these sociodemographic indicators (Tippett & Wolke, 2014; Vitoroulis & Vaillancourt, 2015; Vitoroulis et al., 2018).

2 | METHOD

2.1 | Participants

Participants were drawn from the McMaster Teen Study, which began in the spring of 2008 and was designed to examine the longitudinal links between bullying, academic achievement, and mental health. Participants were initially recruited from 51 randomly

selected schools in southern Ontario when they were in G5 (age 10–11) with assessments still ongoing (time 15). For the longitudinal sample, 875 agreed to participate, and 703 (80.3%) contributed data on at least one follow-up time point (G6–G12). To be included in the analytic sample, participants needed to have data on bullying victimization and perpetration on at least one time point between G5 and G12. The final analytic sample comprised of 701 participants (52.9% girls, 75.9% White; median household income: \$70,000–80,000; median parent completed education: college diploma or trades certificate). These demographic features represent the city from which participants were recruited at time 1.

2.2 | Procedure

Ethics approval was received from the relevant school board and associated university ethics councils. Measures were completed in G5 using paper and pencil within school classrooms and in all subsequent time points data were collected either using paper and pencil or online. Until age 16, parental consent and youth assent were provided, and after age 16, adolescents provided consent. All data were collected in late spring of each academic year. Further details regarding study recruitment and procedures can be found in Vaillancourt et al. (2013).

2.3 | Measures

2.3.1 | Bullying victimization and perpetration

An adapted version of the Olweus Bully/Victim Questionnaire was used to assess bullying victimization and perpetration from G5 to G12 (Olweus, 1996; Vaillancourt et al., 2010). Participants were given a standard definition of bullying and then asked to respond to items assessed on a 5-point scale (0 = *not at all* to 4 = *many times a week*) that measured their involvement with being the target (five items) and perpetrator (five items) of bullying. The five items asked about physical, verbal, social, and cyber-bullying, along with a general question (e.g., “Since the start of the school year, how often have you taken part in bullying another student?”). Items were averaged for each grade, with higher scores reflecting higher bullying victimization ($\alpha = .79-.82$) or perpetration ($\alpha = .71-.81$).

2.3.2 | School transition

Participants transitioned from 63 elementary schools in G8 to 42 high schools in G9.

2.3.3 | Moderator and control variables

In G5, participants reported their gender and parents and youth reported on race/ethnicity. Race/ethnicity was recoded into White

(75.9%) and underrepresented racial groups (16.3%; 7.8% missing). Parents reported their annual household income (1 = <\$19,000 to 8 = >\$80,000) and their highest degree of education (1 = *did not complete high school* to 5 = *university graduate degree*). Due to the high stability in household income ($r_s = 0.713-0.946$, $ps < .001$) and parental education ($r_s = 0.813-0.907$, $ps < .001$) across the eight waves of data collection, only data from the first time point were used.

2.4 | Analytic plan

Descriptive analyses were conducted on SPSS 28.0. Primary discontinuity (level and curve) latent growth curve analyses were conducted with full information maximum likelihood estimation using Mplus 8.0 (Muthén & Muthén, 2017). The impact of high school transition on the level and rate of change for bullying victimization and perpetration (respectively) was examined using piecewise latent growth curves, which model trajectories around a turning point with a separation. Two curves for each bullying victimization and perpetration were examined, one curve for the trajectory from G5 to G8 (pretransition) and one curve for the trajectory from G9 until G12 (posttransition), each with a slope and quadratic parameter. This represented the rate of change before and after the transition into high school (see Supporting Information: Figure S1). We also included level discontinuity by modeling an overall intercept at G5, as well as a level change at G9, permitting an increase or drop between G8 and G9. We estimated a model for the overall sample and evaluated the fit using the comparative fit index (CFI) > 0.95 (Hu & Bentler, 1999), root mean square error of approximation (RMSEA) values < 0.06 (Browne & Cudeck, 1992), standardized root mean square residual (SRMR) values < 0.08, and the χ^2 test. Wald χ^2 tests were used to assess if the pretransition and posttransition curves differed.

Next, we examined heterogeneity using LCGA which allowed us to identify subgroups of individuals that share a similar pattern of development (Nylund-Gibson & Choi, 2018). Model fit was assessed using the Bayesian information criterion (BIC; Jung & Wickrama, 2008; Nagin, 2005; Nylund et al., 2007), the Lo-Mendell-Rubin likelihood ratio test (LMR-LRT; Lo et al., 2001), and the bootstrapped likelihood ratio test (BLRT; Peel & McLachlan, 2000). We also examined posterior probabilities (>0.70; Nagin, 2005) and theoretical soundness including enough individuals in groups and mean levels, as well as patterns consistent with the literature. Up to four groups were examined for bullying victimization and perpetration. The Wald χ^2 test was used to assess if the shape of the pretransition and posttransition curves within each group differed from one another. We estimated the levels of bullying victimization and perpetration in G8 and G9 to examine the difference directly pre- and posttransition. Finally, we examined trajectories conditioned on covariates to see if the number of groups and shapes of the trajectories changed. We also examined if the proportions of girls and boys differed within the trajectories using the χ^2 test and multinomial logistic regression with covariates.

3 | RESULTS

3.1 | Descriptive statistics

The descriptive statistics and correlations are presented in Supporting Information: Tables S1 and S2. Bullying victimization and perpetration were significantly positively correlated at all time points except for G5 victimization with G12 perpetration and G5 perpetration with G7–G12 victimization. Girls reported higher bullying victimization than boys in all grades except for G6. Girls and boys did not differ in levels of bullying perpetration. Missing data analyses were conducted and assumptions of missing at random were examined (see Supporting Information file).

Design effect (DEFF) calculations were used to examine nesting effects by school (G5 and G9) and classroom in G5 (when classroom information was available for this sample). DEFF values under 2.0 indicated that the hierarchical structure was unlikely to influence model results (McNeish, 2014).

3.2 | Primary analyses

3.2.1 | Discontinuity level and curve latent growth models

Parameter estimates describing curves for bullying victimization and perpetration are found in Supporting Information: Table S3. The discontinuity level and curve latent growth model for bullying victimization had good fit, $\chi^2(15) = 26.445$, $p = .034$, CFI = 0.989, RMSEA = 0.033 (90% CI = 0.009–0.053), SRMR = 0.040 (see Figure 1a). The variance of the quadratic parameter in high school was set to zero to aid in estimation. The first curve representing prehigh school transition quadratic change across G5–G8 illustrated a decreasing slope, which declined faster in G5 and G6 than in G7 and G8. The second curve representing change during high school from G9 to G12 was characterized by a declining slope. Between G8 and G9 there was a significant drop in the average level of bullying victimization (unstandardized = 0.167, SE = 0.029, $p < .001$). The intercept and the high school transition level change were negatively correlated ($cov = -0.217$, SE = 0.074, $p = .004$; $r = -.748$, SE = 0.075, $p < .001$). Setting pre- and posttransition slope and quadratic parameters to equal, respectively, resulted in significant increase in mis-fit, $\chi^2(2) = 14.039$, $p < .001$, indicating differences in the pre- and posttransition curves. Specifically, although the rate of change in bullying victimization declined across both elementary and high school, the rate of change was more variable in elementary school, which declined more rapidly around G5, compared to the steady decline in high school. Moreover, individuals starting with higher levels of bullying victimization than others also had larger decreases posttransition than others.

The final level and curve discontinuity latent growth model for bullying perpetration had excellent fit, $\chi^2(21) = 33.342$, $p = .043$, CFI = 0.978, RMSEA = 0.029 (90% CI = 0.005–0.047), SRMR = 0.050

(see Figure 1b). Constraints were imposed to aid model estimation, including constraining the variance of both quadratic parameters to zero, as well as the correlation between the two slope parameters. The first curve, representing change over elementary school, was characterized by an increasing curvilinear pattern that increased more steeply at the end of elementary school. The second curve, representing a change in bullying perpetration over high school, was characterized by a steady decline. The curves for elementary school and high school were significantly different, Wald $\chi^2(2) = 28.119$, $p < .001$. There was also a significant drop in bullying perpetration rates from G8 to G9 (i.e., school transition; unstandardized = 0.080, SE = 0.017, $p < .001$). The intercept was negatively correlated with the second slope ($cov = -0.007$, SE = 0.0032, $p = .004$; $r = -.547$, SE = 0.236, $p = .020$). The first slope was significantly correlated with the high school transition level change ($cov = 0.014$, SE = 0.005, $p = .004$; $r = .714$, SE = 0.119, $p < .001$). Individuals starting with higher levels of bullying perpetration than others had larger decreases posttransition than others. Furthermore, those with larger drops at the transition than others had faster declines over high school than others with smaller drops. The significant variances ($ps < .05$) of the intercept, first slope, and level for bullying victimization and perpetration indicated heterogeneity that encouraged us to conduct LCGA.

3.2.2 | Discontinuity (level and curve) LCGA

We tested up to four possible classes for bullying victimization and perpetration. Fit indices are presented in Supporting Information: Table S4. For bullying victimization, a two-class solution markedly improved the fit over a single class. Each additional class resulted in an improvement in BIC, and each of the models resulted in significant BLRT values. LMR-LRT values were all nonsignificant, and high entropy scores were approximately equal across groups. The four-class solution resulted in a cluster of <2% of the sample. A three-class solution was selected based on parsimony and theoretical soundness. For bullying perpetration, we found a steep drop in BIC from one class to two and a steady decline thereafter, nonsignificant LMR-LRT and significant BLRT for the two, three, and four class models, as well as high, approximately equal entropy values. The four-class solution resulted in two small clusters (i.e., <2% of the sample in each). Relying on theory, content expertise, and parsimony, a three-class solution was selected. Group names were selected based on the most prominent features of the trajectory (i.e., mean levels, shapes, and slopes) relative to one another (Figure 1a,b).

For bullying victimization groups, most individuals reflected low initial levels of victimization in G5 with a curvilinear decline until G8, followed by a drop at the transition, with linear declines in high school (77.9%, $n = 546$; see Supporting Information: Table S3 for parameter estimates). This group was referred to as the “low decreasing” group. The second group reflected medium initial levels of victimization scores that decreased from G5 to G6 but increased from G7 to G8 and remained stable from G9 to G12 (11.4%, $n = 80$).

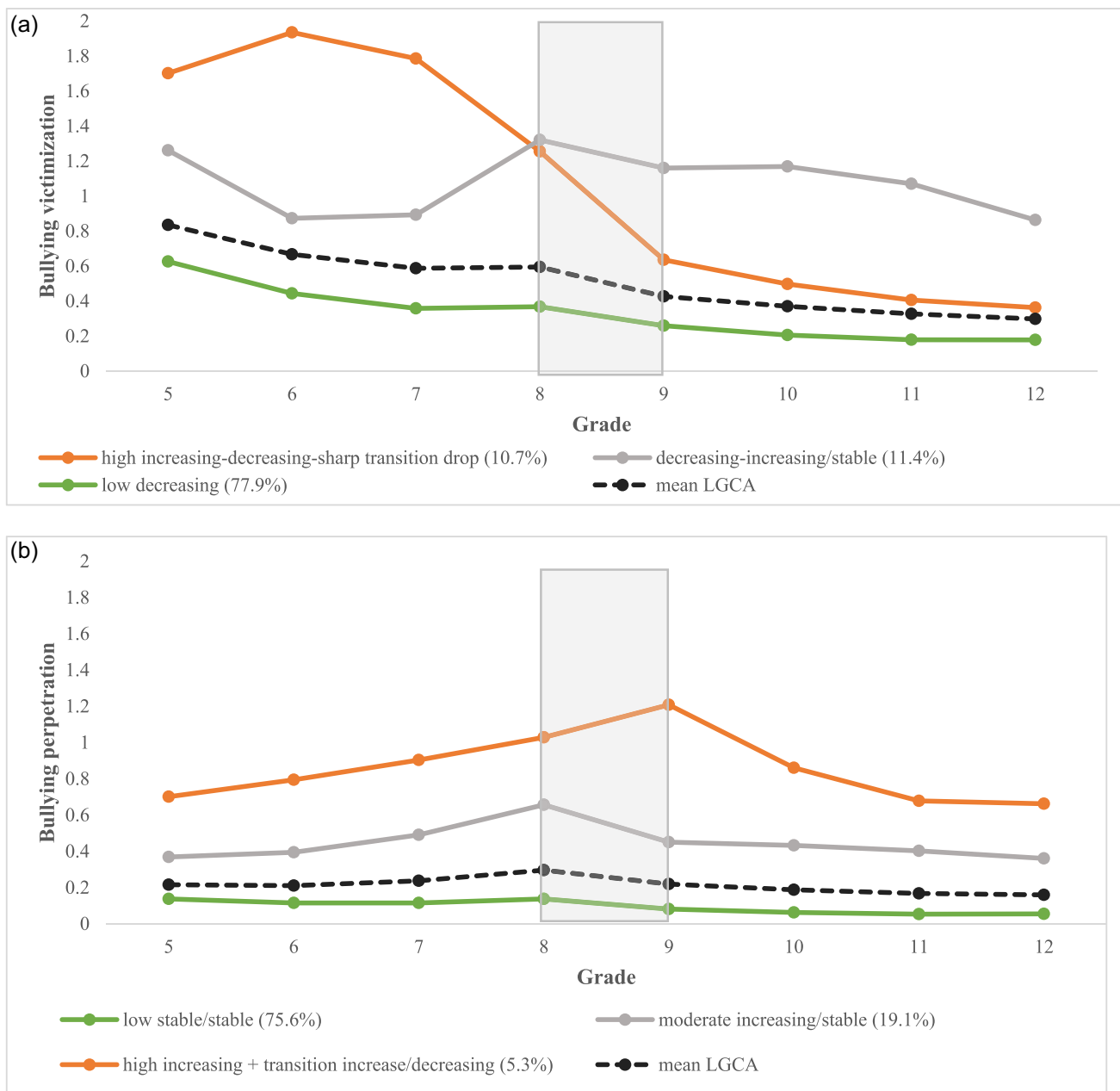


FIGURE 1 Discontinuity slope and level latent growth models for bullying victimization and perpetration before and after the high school transition. Overall sample and heterogeneous subgroups. (a) Bullying victimization before and after the high school transition for the overall group and subgroups. (b) Bullying perpetration before and after the high school transition for the overall group and subgroups. Scale 0 = not at all to 4 = many times a week. Vertical shaded region between G8 and G9 represents the level discontinuity in the latent growth models. Grades before the shaded region represent pretransition time points (elementary school) and grades after the shaded region represent posttransition time points (high school). [Color figure can be viewed at wileyonlinelibrary.com]

This group was referred to as the “decreasing-increasing/stable” group. The final group began with the highest initial levels of victimization that increased from G5 to G6 and declined from G7 to G8, followed by a marked drop at the transition and a steady decline from G9 to G12 (10.7%, $n = 75$). This group was referred to as the “high increasing-decreasing-sharp transition drop” group. Posterior probabilities were high and indicated that individuals were well-matched in their groups (min = 0.878). There were no

significant differences between pre- and posttransition curves within the three bullying victimization trajectory groups, Wald $\chi^2(6) = 4.067, p = .668$. The magnitude of the change between G8 and G9 for each class of bullying victimization indicated that the change in bullying victimization at the transition was different than zero for the low decreasing (unstandardized = $-0.104, SE = 0.025, p < .001$) and high increasing-decreasing-sharp transition drop (unstandardized = $-0.615, SE = 0.162, p < .001$), but not for the

decreasing-increasing/stable group (unstandardized = -0.159 , $SE = 0.130$, $p = .223$). The magnitude of change did not differ across the groups, Wald $\chi^2(2) = 1.194$, $p = .550$.

For bullying perpetration groups, most individuals reflected low initial levels of bullying perpetration in G5 that remained stable from G5 to G8 with a drop at the transition and remained stable after the transition from G9 to G12 (75.6%, $n = 530$). This group was referred to as the “low stable/stable” group. The second largest group reflected moderate initial levels of bullying perpetration that had a marginal increase over elementary school, dropped at the transition and stayed stable across high school (19.1%, $n = 134$). This group was referred to as the “moderate increasing/stable” group. The smallest group reflected high initial levels of bullying perpetration that increased before the transition, then *increased* at the transition, followed by a decline from G10 to G12 (5.3%, $n = 37$). This group was referred to as the “high increasing + transition increase/decreasing” group. Posterior probabilities were high and indicated that individuals were well-matched in their groups (≥ 0.898). There were no significant differences between pre- and posttransition curves within the three bullying perpetration trajectory groups, Wald $\chi^2(6) = 1.811$, $p = .936$. The magnitude of the change in bullying perpetration at the transition was different than zero for the low stable/stable (unstandardized = -0.052 , $SE = 0.014$, $p < .001$) and moderate increasing/stable (unstandardized = -0.208 , $SE = 0.070$, $p = .003$) groups but not for the high increasing + transition increase/decreasing (unstandardized = 0.183 , $SE = 0.302$, $p = .546$) group. The magnitude of change did not significantly differ across the groups, Wald $\chi^2(2) = 3.437$, $p = .179$. Finally, the trajectories conditional on the control variables were like the unconditional trajectories.

3.3 | Secondary analyses

Results of χ^2 tests indicated that the proportion of girls and boys differed across bullying victimization trajectory groups, $\chi^2(2) = 9.973$, $p = .007$, $\phi = 0.119$. There were fewer boys than expected in the decreasing-increasing/stable group, standardized residual = -2.1 (boys = 31.3%; girls = 68.8%). The composition of the high increasing-decreasing sharp transition drop (boys = 44.0%; girls = 56.0%) and the low decreasing (boys = 49.8%; girls = 50.2%) groups did not differ by gender. Controlling for household income, parental education, and race/ethnicity, results of a multinomial logistic regression indicated that gender was associated with the trajectory groups, $\chi^2(2) = 6.022$, $p = .049$. Specifically, boys were half as likely as girls (OR = 0.533, $p = .019$) to be included in the moderate decreasing-increasing/stable group than the low decreasing group.

Regarding bullying perpetration, the proportion of girls and boys were approximately equal across trajectory groups, $\chi^2(2) = 0.573$, $p = .751$, $\phi = 0.029$. These results were replicated using a multinomial logistic regression including covariates; no gender differences were found between groups.

4 | DISCUSSION

Our aim for this brief report on bullying involvement and school transition was simple, but the analyses were complex. Using level and curve discontinuity latent growth models, we assessed if bullying trajectories shifted in their level or growth (i.e., slope, quadratic) using the timing of school transition to model the trajectory. The evidence suggests that bullying perpetration rates either increase (Pellegrini & Bartini, 2000; Pellegrini & Long, 2002; Pepler et al., 2006) or decrease (Farmer et al., 2011) in the transition to new education environments, while rates of bullying victimization seem to decrease during school transitions (Farmer et al., 2011; Pellegrini & Bartini, 2000; Pellegrini & Long, 2002; Wang et al., 2016). When heterogeneity is examined, decreasing and increasing subgroups are found for bullying perpetration, with more boys than girls found in the decreasing and increasing group (Espelage et al., 2015).

Our results generally replicate these findings and align with our initial predictions with far more nuance. On average, bullying victimization declined over time with a significant drop noted between G8 and G9 (the transition into high school). The decline in bullying victimization was also more variable in elementary school than in high school. In contrast, bullying perpetration was characterized by a curvilinear pattern that increased more steeply at the end of elementary school. This increase was followed by a significant drop in bullying perpetration during the transition into high school and a steady decline in high school. The overall decline in bullying involvement during the transition into high school will be welcomed news for youth who commonly worry about being bullied as they transition to a new school (Lucey & Reay, 2000; Rice et al., 2011; Zeedyk et al., 2003).

When we examined heterogeneous experiences with bullying in relation to school transition, we found consistent declines for bullying victimization, as predicted, but not for bullying perpetration. Specifically, the low decreasing trajectory reflected low initial levels of bullying victimization in G5, declines pre- and posttransition, and a drop at the transition, which continued to decline across high school (77.9%). We also found a group that was characterized by medium initial levels of bullying victimization scores that decreased from G5 to G6 but increased from G7 to G8 and then remained stable from G9 to G12 (11.4%). The final subgroup started with the highest initial levels of bullying victimization then increased from G5 to G6 and declined from G7 to G8, followed by a marked drop at the transition and a steady decline from G9 to G12 (10.7%). These trajectories suggest that there is recovery from bullying victimization for most youth after the transition into high school. These distinct trajectories also provide evidence of when it would be best to allocate additional resources to reduce bullying victimization (i.e., in G5 or earlier and again in G8). However, because these results might not replicate across other regions, we encourage researchers to examine school transitions using our sophisticated analytic approach to help inform more precise intervention efforts in this area.

Regarding bullying perpetration, our results suggest that there was a decline for most youth as they entered high school, which we predicted. Indeed, most youth were represented in the two declining

trajectories—one that reflected low initial levels of bullying perpetration in G5 that remained stable from G5 to G8 with a drop at the transition and remained stable after the transition from G9 to G12 (75.6%) and another that was characterized by moderate initial levels bullying perpetration that had a marginal increase over elementary school, a drop at the transition into high school, that remained stable over time (19.1%). We expected to find this pattern for victimization and perpetration, but it only emerged for bullying perpetration. We identified one particularly concerning group. The high increasing + transition increase/decreasing group (5.3%), although small in numbers, represents an important focus for intervention strategies especially given the cost borne to targets and perpetrators of bullying.

We explored gender differences given that boys tend to be more involved in bullying than girls (Scheithauer et al., 2006; Smith et al., 2019) and school transition has been shown to differentially impact boys' and girls' involvement in bullying (Pepler et al., 2006; Wang et al., 2016). In our study, girls tended to report higher bullying victimization than boys and there were no gender differences for bullying perpetration. Moreover, fewer boys were represented in the decreasing–increasing/stable bullying victimization group than girls, and boys were half as likely as girls to be in the moderate decreasing–increasing/stable bullying victimization group than the low decreasing bullying victimization group. The differences between our results and previous findings may reflect cultural differences. In recent study of 6578 Canadian students, Vaillancourt et al. (2021) found that girls were bullied more than boys and boys bullied others more than girls. Using data from 2017/2018 Health Behavior in School-aged Children survey, Inchley et al. (2020) found that the prevalence for bullying victimization was highest for boys than for girls across 12 countries except for Canada (girls > boys). It is not clear why Canada is a consistent outlier. It could reflect a need to target bullying interventions among girls in Canada.

The sample size, the repeated measures across 8 years of development, and the precise examination of the impact of transition into high school on trajectories of bullying involvement were strengths of this study. Nevertheless, the following limitations need to be considered. As with any longitudinal study, attrition was not random, although we did manage this issue by examining auxiliary variables (Brittain & Vaillancourt, 2023; see Supporting Information file on missing data analyses). We relied on self-reported bullying involvement, which is sensitive to social desirability effects. This limitation is likely reflected in the low and null correlations found across time with G5 bullying perpetration. G5 students may have been less willing to admit that they bullied others because they did not trust that their data would be kept confidential. Their increased experiences with our research group likely enhanced their confidence and thus their willingness to admit to behaving poorly. We did not include predictors of trajectories which could prove helpful when designing intervention and prevention programs. One of the challenges with examining predictors is that there was heterogeneity between trajectories (intercepts and shape) and within trajectories (e.g., some were linear vs. curvilinear). Should the predictors be considered at the beginning of an increase or decrease or at the start

of the trajectories? Or should they be modeled longitudinally given that they may change over time, like weight status, for example (Lee & Vaillancourt, 2019). This is statistically complex and beyond the scope of a brief report. Nevertheless, we encourage researchers to consider how factors like puberty timing, anxiety, physical stature, popularity, and so on could mediate or moderate the observed effects. Finally, we did not examine joint trajectories as has been recommended (Marsh et al., 2022) despite the overlap between victimization and perpetration. This decision was based on our desire to compare our results with the existing literature, which has typically examined victimization or perpetration rates separately in the transition to a new learning environment.

We examined the impact of transitioning into high school in a large cohort of Canadian youth and found that this typical life event was associated with universal reductions in bullying victimization and nearly widespread reductions in bullying perpetration. For 5.3% of adolescents, a notable increase in bullying perpetration was found after they transitioned into high school.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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SUPPORTING INFORMATION

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