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Arenas of comfort and conflict: Peer relationship events and young people's educational attainment

ABSTRACT:

Previous research suggests that developments in young people's peer relationships may either compound or alleviate the adverse impacts of other major life changes during adolescence. We explored this proposition with respect to young people's educational attainment upon leaving high school, using longitudinal data from a large cohort of Australian secondary school students (n=1,612) who have taken part in the Our Lives research study between the ages of 12/13 and 19/20 years. Our analysis focused on the role of peer relationship events such as bullying, friendship problems, falling in love, and breaking up with someone. Bullying and romantic involvement were associated with lower odds of receiving a competitive tertiary entrance rank at the end of high school. However, close, resilient friendships - in which status and identity conflicts may be more easily tolerated and resolved - may help to offset the role of these other events. As well as reviewing the consequences of our findings for young people's educational and occupational trajectories in the longer-term, we highlight their implications for future research and policy in this area.

Keywords: Schooling, peer relationships, life events, youth transitions, arenas of comfort

Introduction

Drawing on data from a large cohort study of young people in Queensland, Australia, this paper investigates the relationship between young people's experiences of peer relationship

events during high school and their educational attainment upon leaving school. Research on the role of social capital in education shows that strong social ties within and between family and the school positively influence young people's academic trajectories (Coleman 1988; Dika & Singh 2002). By contrast, peer relationships are often held responsible for the spread of negative attitudes towards school amongst marginalised youth (Ream & Rumberger 2008), and behaviors that might jeopardise academic outcomes, such as bullying, dating, sexual intercourse, and substance abuse (Billett 2014). Yet adolescent friendships, such as those developed through extracurricular activities, have also been shown to support young Australians' educational engagement (Fullarton 2002), psychosocial resilience (Blomfeld & Barber 2011) and transitions into education and training (Holland et al. 2007; Semo & Karmel 2011). At a time when young Australians are being urged to assume greater accountability for their transitions into post-school work and study, the manner in which their peer relationships feature in such transitions has received insufficient attention.

Arenas of comfort and conflict: Vulnerability and resilience in adolescent peer networks

An 'arena of comfort' refers to a social environment or set of relationships which offers young people relative stability and reprieve from changes or disruptions occurring in other areas of their lives during the transition from adolescence to adulthood. Simmons et al. (1987) developed this concept to explain why various life events (such as changing school, experiencing puberty, or early dating) can be particularly harmful to adolescent self-esteem and academic achievement when experienced simultaneously rather than at separate times. Observing such effects in the lives of American adolescents almost three decades ago, they argued that 'if change comes too suddenly... or if it occurs in too many areas of life at once, then individuals may experience considerable discomfort' (Simmons et al., 1987: 1231). The idea that young people require 'a sense of having a secure base' from which to explore and engage with the wider world (Gilligan 2000: 39) has since been widely adopted to explain adverse developmental outcomes and to identify factors associated with psychological resilience in adolescence (Call & Mortimer 2001; Grills-Tacquechel et al. 2010).

From this more epidemiological origin, the concept has entered sociological research via the work of scholars examining family dynamics and early life course trajectories (Crosnoe & Elder 2004; Roche & Ghazarian 2012). Reviewing a wide range of studies, Hines (1997) concludes that children of divorce struggle to cope with developments in other areas of their lives when their families lose the capacity to function as arenas of comfort. However, she notes that this primarily occurs when there has been prolonged and intense marital

conflict prior to divorce, and that positive parent-adolescent relationships tend to ameliorate such effects. When these relationships are lacking, other studies have found that overlapping sources of emotional support beyond the family context can buffer against academic disengagement (Crosnoe & Elder 2004; Woolley & Bowen 2007). Analysing data from the U.S. National Longitudinal Study of Adolescent Health (Add Health), Crosnoe and Elder (2004) reported that non-parental sources of support such as friends, siblings, and teachers, promoted educational resilience and reduced 'off-track' academic behavior for adolescents who displayed emotional distance from their parents. Yet they also found that the role of friends varied by gender and race/ethnicity: girls benefitted more than boys from close, supportive friendships, whereas friends exacerbated the risk of academic disengagement amongst African-American and Hispanic youth.

Such findings echo those of research showing the varied educational impact of young people's participation in extracurricular activities. Although certain structured activities (e.g. school sport, performing arts, hobby clubs) can reinforce more 'school-orientated' friendships which value schoolwork and higher educational aspirations, such benefits have been found to accrue unevenly to those who can afford to enroll these activities and who are intrinsically motivated or encouraged by parents to do so (Fredericks & Eccles 2006; Fullarton 2002; White & Gager 2007). Meanwhile, those who engage primarily in 'out-of-school' social activities may be more likely to form friendships which disavow academic pursuits and privilege alternative identity roles and aspirations (Ream & Rumberger 2008). As Billett (2014) notes, friendship ties of the latter variety have prompted negative depictions of youth-derived social capital (e.g. as 'bad' or 'dark' social capital). Youth studies scholars have criticised such depictions for dismissing young people's agency when the forms of social and cultural capital they generate for themselves (rather than inheriting from their parents) help them to manage the challenges and transitions accompanying late adolescence and early adulthood (AUTHOR A; France et. al. 2013; Shildrick & MacDonald 2008). By conceptualising peer relationships as arenas of comfort and conflict, we seek to both reaffirm and further explore this notion that peer relationships may have varied yet significant implications for young people's life pathways in late adolescence and early adulthood.

Gauging the impact of different types of peer relationship events

Adolescents' social worlds encompass the romantic and the platonic, close friends and superficial acquaintances, competitive rivalries and collaborative alliances, many of these overlapping and few surviving the high school years completely unchanged. Drawing together diverse strands of literature, Giordano (2003) argues that different relationship types entail distinct processes and outcomes for young people depending on their social location (e.g. gender, class, and race/ethnicity). In particular, she distinguishes between the 'intimacy processes' which underpin closer emotional attachments (which can serve as arenas of comfort), and 'influence processes', which drive the formation of ties amongst individuals with similar values and behaviors (i.e. 'birds of a feather') (Giordano 2003). These processes are closely interconnected, with close friendship groups providing influential yet often exclusive contexts for support and socialisation during adolescence.

Some forms of peer influence entail clear risks for young people's academic and social adjustment. For instance, bullying and victimisation are closely related to the dynamics of peer status recognition and rejection amongst high school students. Young people who are rejected by their peers are at much greater risk of various forms of bullying (e.g. physical, verbal, relational, cyberbullying) whilst those who engage in bullying tend to be less socially isolated (Wang et al. 2009). Much cross-sectional evidence suggests that being bullied may lead to decreased self-esteem, increased delinquency, and poorer academic performance (Rothson et al. 2011). However, relatively few studies have examined the longer term educational impacts of such victimisation during school. In the Australian context, Bond et al. (2001) found that bullied Grade 8 students (aged 13) displayed more symptoms of depression or anxiety in the following year, and that although bullying was more common amongst males, its effects were stronger amongst females. Although friendship networks can prevent victimization and reduce its adverse effects, events such as schooling transitions disrupt these relationships and the protective functions they can provide (Pellegrini & Bartini 2000).

Some forms of peer intimacy, such as romance and dating, may also affect young people's academic and post-schooling careers. Amongst adolescents in the U.S. Add Health study, Joyner and Udry (2000) found that romantic involvement predicted increases in depression and disruption to peer and parent-child relationships, particularly for females. While cross-sex friendships and romantic relationships are also associated with earlier and higher-risk sexual behaviors (Giordano 2003), what is less clear is how such relationships affect academic outcomes. In their longitudinal analysis of data from the U.S. National Longitudinal Study of Youth (NLSY97), Pham, Keenan & Han (2013) found that frequent

dating and early sexual experiences negatively affected academic outcomes, whereas moderate dating activities had a more positive impact. The authors attribute the former negative effects to the amount of time displaced from study by frequent dating, and to mental and physical health problems associated with early sexual activity. Meanwhile, they cite evidence of the positive impact of moderate dating on young people's self-esteem, interpersonal skills, and social support to help explain its academic benefits. The meanings given to romantic relationships, and the extent to which feelings of love are reciprocated by those involved, may hold the key to explaining these varying effects. On this note, Soller (2014: 56) found that relationship inauthenticity - 'incongruence between thoughts/feelings and actions within relationship contexts' - helped account for the negative impact of adolescent romance on females' mental health.

Based on the literature highlighted above, we examine the potential for various peer relationship events to affect young Australians' developing educational and occupational pathways. To this end, our approach is guided by the following research question:

To what extent do peer relationship events (such as bullying, falling in love, breaking up, and friendship problems) experienced during high school predict young people's levels of educational attainment and achievement?

Methods

Data and Sample Characteristics

The data for this paper are from waves 1-4 of the Social Futures and Life Pathways ('Our Lives') project, which is a longitudinal cohort survey of young people in Queensland, Australia. The survey instrument contains questions measuring young people's values, behaviors, and aspirations, as well as their educational and occupational trajectories, as these develop over the course of adolescence and early adulthood. While in earlier waves the self-completed surveys were administered either in hardcopy or online format, in later waves they have been conducted online or via computer-assisted telephone interviewing (CATI).

In 2006, an attempt was made to sample all secondary schools in the state, and all Year 8 students (i.e. the first year of secondary schooling, aged 12/13 years) in those schools. This yielded a school-level response of 55 percent (n=213 schools) and a within-school response of 34 percent (n=7,031 students). Subsequent waves of data collection were conducted in the middle of high school (2008, aged 14/15), at the end of high school (2010, aged 16/17), and three years after high school (2013, aged 19/20). In each wave an attempt

was made to contact original participants using contact details they provided earlier. Amongst those with valid details, these approaches yielded response rates of 58 percent in wave 2 (n=3,649), 58 percent in wave 3 (n=3,139), and 41 percent in wave 4 (n=2,206). The analysis for this paper focuses on measures of schooling achievement which were asked in wave 4, and measures of major life events that were asked across waves 1-3. The final analytic sample is thus a smaller subset of respondents (n=1,612) who completed all survey waves and were not missing data on any of these measures.

Tables 1 and 2 contain sample characteristics and frequency distributions. Although the wave 1 sample was representative of the QLD Year 8 population in 2006, in later waves there has been a disproportionately higher retention rate for female respondents and students from the (typically wealthier) Independent schooling sector (ABS 2011). This rate of attrition is comparable to other Australian studies of similar cohorts (Wyn et al. 2010; Rothman 2009), and factors associated with attrition are controlled for in the multivariate analysis (Winship & Radbill 1994). Despite these attrition effects, the sample remains representative of the population of young people aged 19/20 years living in urban and regional/rural areas in Queensland (ABS 2011).

Dependent Variables

The dependent variables examined in our analysis measure the educational attainment of Queensland students in their final year of secondary school. The measures are based on tertiary entrance rankings known as ‘Overall Positions’ (OPs) which are used to rank the educational performance of Queensland students relative to others in their cohort, and to determine the allocation of places in university degree programs. Since OP scores differ from the ranking system used in other Australian states and territories - the Australian Tertiary Admission Ranking (ATAR) system - we have converted OP scores to ATARs using the same procedure undertaken for interstate tertiary admissions¹. ATARs are percentile scores with a theoretical range between 0 and 99.95 (however in most states, including when converting from Queensland OPs, the lowest reported value is capped at ‘less than 30’).

[TABLE 1 ABOUT HERE]

Similar to Houngh and Justman (2014) in their analysis of influences on Victorian ATAR scores, we examine both binary and continuous ATAR measures. The binary measure

¹ Conversion tables were provided on request by the Queensland Tertiary Admissions Centre (QTAC).

allows us to compare students who reached a given ATAR cut-off point against those who did not, and thus includes all school leavers within the sample irrespective of whether they received an ATAR. The continuous measure is restricted to those who received an ATAR.

For the binary measure we selected a cut-off ATAR score of 70 ('ATAR70'). A vast majority (over 70 percent) of all Queensland school leavers who applied to university in 2010-2011 with scores above this cut-off received and accepted offers of a university place. Although many non-ATAR70+ students also went on to attend university, below this cut-off the proportion of applicants decreases significantly, as does the likelihood that these applicants received and accepted offers for their first preference course/institution (DEEWR, 2011). In addition to lower performing students, the group of non-ATAR70 respondents includes students who were ineligible to receive an ATAR for two possible reasons: (1) they left school prior to finishing Year 12 (i.e. in order to undertake full-time work); or (2) they completed more vocationally-orientated school subjects (e.g. hospitality) or Vocational Education and Training (VET) courses which resulted in a qualification other than an ATAR.

As might be expected, sample attrition has resulted in an underrepresentation of non-ATAR70+ students within the longitudinal sample - around 26 percent (n=419) compared to around 60 percent within the actual population (QLD Government 2011). Nonetheless, sufficient numbers of these students are included in the analysis to broadly illustrate the relationship between peer relationship events and entry into an alternative post-schooling pathway to university study. The distribution on the continuous ATAR measure was similarly skewed towards better performance when compared with the actual Year 12 population in 2010 (QSA, 2010). The mean ATAR for Queensland school leavers in 2010 was approximately 77, whereas for the analytic sample it was 83.5. Although the sample size and inclusion of a wide range of socio-demographic controls may help to account for this imbalance, we still emphasise a degree of caution as to the generalisability of our findings.

Explanatory variables

The analysis investigates how various major life events reported during high school (shown in Table 2) impacted on respondents' academic outcomes upon leaving school. In waves 1-3, respondents were asked '*Have the following events ever happened to you?*' For each of the events contained in Table 2, respondents selected from the following response options: 1= '*Never*'; 2= '*Within the last 6 months*'; 3= '*Within the last year*'; 4= '*More than a year ago*'. To create the events measures, wave-specific dummy variables were first

generated for each event/wave. These were coded 1 if a respondent reported experiencing the event '*Within the last 6 months*' or '*Within the last year*' and 0 if they responded '*Never*' or '*More than a year ago*'. These were then used to generate a cross-wave variable counting each time respondents reported each event in the year prior to a survey. Since respondents completed three surveys during high school, there was a maximum range of 0-3 for the number of times they could report each type of event.

Table 2 displays the frequency of reported events, ordered by how likely they were to be reported at least once across the five year period. Friendship problems were by far the most common type of event reported by those surveyed, with 84 percent of the sample reporting this during at least one survey wave. Falling in love, the death of a family member or friend, breaking up with someone, and family problems were events which most respondents reported during their time at high school. While less common, being bullied was something many respondents reported at least once, whereas serious health problems, changing school, or parental divorce/separation were rarely reported events.

[TABLE 2 ABOUT HERE]

Control Variables

To ensure that any correlations observed between the dependent and explanatory measures are specific to the time period under examination (i.e. high school), we controlled for respondents' initial levels of educational performance, and their prior experiences of the events in question. Educational performance is measured at the beginning of high school using Trapnell's (1994) 'Smart Scale', which is a well-established self-assessed measure of IQ. The Smart Scale a range from 4 to 36 (with a high score indicating higher intelligence), a mean of 24.6, and is highly reliable (Cronbach's alpha = 0.88). To control for events experienced prior to high school, for each event dummy variables were used to indicate those who reported events occurring '*More than a year ago*' during the first year of high school. The frequencies for these binary event measures are also shown in Table 2, and while most were uncommon, the most widely reported event was the death of a family member or friend.

Socio-demographic factors known to influence educational attainment were also controlled for. On average, female students tend to score receive higher ATAR scores than males (Houng & Justman 2014). Sex is controlled for with a dummy variable coded 0=male and 1=female. Schooling sector is also an important predictor of educational attainment in the Australian context, with tertiary ranking eligibility and achievement levels typically higher

for Independent school students than it is for State or Catholic school students (Marks et al., 2011). While private schools in Australia may be either Catholic or Independent, Independent schools have various characteristics (e.g. higher fees, more selective admission, lower pupil-teacher ratios) which favor the reproduction of educational advantages (Caldwell, 2010; Dearden et al. 2010). The sector variable differentiates between these three school types based on a respondent's wave 1 school, with State as the reference category. Post-secondary educational participation tends to be lower amongst young people living outside major cities in Australia (Marks et al., 2011). Geographic location is thus controlled for with a measure of whether a respondents' postcode at wave 1 was inside or outside a major city area.

As well as affecting school choice, parental education and occupation is widely understood to influence educational performance when better-educated parents and those in more prestigious occupations devote more time and resources to cultivating their children's academic dispositions (Coleman, 1988). We control for the highest level of education achieved by either parent as measured in wave 1, or wave 2 if earlier data was missing. The parental education measure distinguishes between those with a university degree or higher, those with a vocational qualification (e.g. TAFE certificate or apprenticeship), and those with school-level qualifications. Those who were missing data (n=9) or responded 'Don't know' (n=39) to the parental education question in both waves 1 and 2 were combined into one category and controlled for in the analysis. Responses to an open-ended question about parental occupation were coded according to the Australian Standard Classification of Occupations (ASCO) and then assigned a score from 0-100 on the ANU4 occupational prestige scale (Jones & McMillan, 2001).

Finally, we include several measures of young people's social, extra-curricular, and labour market participation which have been shown to mediate the relationship between peer relationship events and educational attainment, often in varying ways. For instance, having a large number of close friends during high school has previously been associated with higher achievement test scores (Dika & Singh, 2002) and may also provide social support needed to reduce the negative impact of certain events (such as bullying) on educational performance (Rothon et al. 2011). In our analysis we control for the number of 'close friends' a respondent reported having in wave 2 (1=None; 2=1-3 friends; 3=4-6 friends; 4=7-9 friends; 5=10+ friends). Similarly, young people's participation in extra-curricular activities has been shown to positively influence academic achievement and educational aspirations, albeit when the activities in question are either school-orientated (Fullarton, 2002) or likely to expose one to

others with the requisite values, skills, or resources for schooling success (White & Gager, 2007). Similar to White and Gager (2007), and as we have done previously (AUTHOR A) we focus on participation in a broader set of structured ‘out-of-school’ activities, such as sports clubs, religious groups, volunteering, music/band, performing arts/cultural clubs, hobby/fan clubs and political associations. During wave 2, for each activity respondents rated their frequency of participation (0=Never; 4=Everyday), and a summary index (ranging 0 to 26) was generated by summing the responses on these measures. Lastly, young people’s involvement in part-time work during school may adversely affect their academic performance by reducing the overall amount of time they have to devote to study (Robinson, 1999). In waves 2 and 3 respondents were asked whether or not they worked in a part-time job. These measures were combined to create a variable with four categories indicating a respondent’s work status across the latter years of high school.

Analytic Approach

We investigated the relationship between peer relationship events and educational attainment in two ways. First, we examine whether or not respondents received an ATAR greater than 70. ATAR70+ school leavers were considerably more likely to apply to university, and those who did were more likely to be admitted to their preferred course/institution. Logistic regression analysis was used to analyse this binary measure (where 0 = Non-ATAR70+ respondent a ranking and 1 = Did not receive a ranking). Coefficients for these models are shown as odds ratios. Second, for those who received one, we analyse respondents’ tertiary entrance ranks as a measure of their level of educational performance. We use ordinary least squares (OLS) regression to estimate these models.

For both outcome measures, we estimate four models: Model 1 controls for prior academic achievement, events experienced prior to high school, and all other student characteristics; Model 2 adds in parental SES measures which affect educational attainment and school choice; Model 3 includes all life events measures except for bullying; and lastly, to illustrate its prominence in the findings and its interactions with the other event measures, we include the bullying measure separately in Model 4. All models included an option to account for within-school clustering when calculating standard errors, allowing for more robust tests of significance. All analyses were estimated using Stata 13 (StataCorp, 2013).

Results

Receiving an Australian Tertiary Admission Rank (ATAR) greater than 70

Table displays the results for logistic regression models examining the odds of receiving an ATAR greater than 70 at the end of school. Model 1 (column 1) displays how the odds of receiving an ATAR70+ vary according to the baseline and student characteristic measures outlined earlier. The baseline measures include a respondents' self-assessed intelligence at the start of high school and whether or not they had experienced each of the nine life events prior to high school. Since only one such event (having broken up with a boyfriend or girlfriend) displayed a significant association for any of the models examined, results for the other events were omitted from the output. The pseudo R^2 value indicates that the model accounts for 14 percent of the total variation in odds of receiving an ATAR70+ score. The odds ratio for the Smart Scale (1.1, $p < 0.001$) indicates that, after all other control measures are accounted for, every one point increase in self-assessed intelligence at wave 1 predicted a 10 percent increase in the odds of being an ATAR70+ student five years later. Having broken up with a boyfriend/girlfriend was not significantly associated with receiving an ATAR70+ score until later models.

[TABLE 3 ABOUT HERE]

Of the background variables examined, gender, schooling sector, and geographic region significantly predicted the likelihood of being an ATAR70+ student. Females were 60 percent more likely than males to receive such a rank, whilst respondents living outside major cities were 70 percent less likely to do so than their urban counterparts. Most notably, attending an Independent school rather than a State school meant that a respondent was 2.8 times more likely to receive an ATAR over 70. Other contextual measures, such as a respondents' extracurricular participation, involvement in work, and number of close friends during school, were not significantly correlated with the outcome variable when all other measures in Model 1 are accounted for.

Given that parental SES is a critical determinant of educational outcomes, measures relating to parental SES are incorporated separately in Model 2. When these measures of parental education and occupational prestige are added, the total variation explained rises to over 18 percent. Each 10 point increase in their parents' occupational prestige (0-100) was accompanied by a 10 percent increase in a respondent's odds of being an ATAR70+ student. Compared to respondents with at least one university-educated parent, those who did not know or provide their parents' education were 80 percent less likely to be ATAR70+ students upon leaving school. Meanwhile, those whose parents' highest education level was vocational or school-level were 40 percent and 50 percent less likely, respectively, to receive

an ATAR70+ score. The inclusion of parental SES measures that were likely correlated with school choice helped account for around one-third of the positive association between attending an Independent school (rather than a State school) and being an ATAR70+ student.

Model 3 adds in the life event measures, with the exception of bullying, and this set of covariates explains around 21 percent of the total variation. Five of the eight measures were related to whether or not respondents received an ATAR70+ score. For each wave in which a respondent reported having fallen in love, experiencing the death of a family member/friend, or family problems, there was a 20 percent decrease in their odds of receiving an ATAR70+ score at the end of high school. Those who reported changing school were at least 30 percent less likely to receive such a rank. Experiencing friendship problems was the only life event that was positively related to the outcome measure: for each wave in which a respondent reported friendship problems, they were 20 percent more likely to receive an ATAR70+ score.

When Model 4 includes bullying alongside the other life event measures, the total variance explained rises to 23 percent, and several prior associations are affected. Bullying displays one of the strongest associations with whether or not respondents received an ATAR70+ score. For each wave during which a respondent reported being bullied by other kids, there was a 40 percent decrease in their likelihood of receiving an ATAR70+ score, net of the other events controlled for in the model. Moreover, when bullying was accounted for in the model, the negative association for family problems is no longer significant, whilst the positive association for friendship problems increases in both size and significance. This latter change suggests that, when the analysis differentiates bullying from other types of friendship problems, there is a strong positive correlation between this more benign type of interpersonal conflict and receiving an ATAR70+ score.

Australian Tertiary Admission Rank (ATAR) Achieved

Table 4 shows the results of the OLS regression models examining the actual rank score of those who received an ATAR. The rank measure has been rescaled to 0-100 so that covariate effects may be interpreted as a percentage increase or decrease in rank (where a higher rank denotes better ATAR performance). Model 1 (column 1) examines how respondents' rankings varied by each of the baseline and student characteristic measures. This model accounts for 21 percent of the overall variation in rankings. Net of the other measures in the model, each increment of one point on the Smart Scale in wave 1 predicted a 1.4 percent increase in respondents' ATAR score at the end of high school 5 years later. We also

included controls for whether or not respondents reported experiencing any of the life events prior to high school. Only the two life event measures displayed significant associations in any of the models - friendship problems and bullying. While bullying was not significant until the final model, those who reported experiencing friendship problems prior to high school scored 5 percent higher than those who did not report such problems.

[TABLE 4 ABOUT HERE]

Of the student characteristics accounted for here, schooling sector, work status during high school, and number of close friends were significantly correlated with respondents' ATAR scores. The largest association was for schooling sector: Independent school students achieved ATAR scores that were around 10 percent higher than those of State school students. Meanwhile, respondents who were persistently employed (i.e. working in Years 10 and 12) were ranked 7 percent lower than those who did not work during high school. There was also a small but statistically significant decrease in ATAR for each category increment (1-5) in the number of close friends a respondent reported having during high school.

When Model 2 incorporates the parental SES measures, the overall variance explained rises to 25 percent. Parental education and occupational prestige were both positively associated with a respondent's ATAR score. Each 10 point increase in parental occupational prestige was associated with a 1 percent increase in a respondent's ATAR score. On average, respondents who did not know or provide their parents' education received ATAR scores around 13 percent lower than those with at least one tertiary-educated parent. Meanwhile, those whose parents' highest education level was vocational or school-level scored 5 percent and 7 percent lower, respectively, than those with a tertiary-educated parent. Similar to the previous set of analyses, controlling for parental SES measures explained around one-quarter of the positive association between attending an Independent school (rather than a State school) and a respondent's ATAR performance.

With the addition of the life event measures except for bullying, the explained variance rises further to 27 percent. Three of the eight events in question display significant, negative associations with respondents' level of ATAR performance, the strongest of these being falling in love. For each wave in which a respondent reported having fallen in love, there was a 2.5 percent decrease in their ATAR score at the end of high school. There were similar decreases in ATAR scores of around 2 percent for each wave in which respondents reported experiencing family problems or the death of a family member or friend.

Finally, Model 4 adds in the bullying measure, increasing the total variance explained to 29 percent. As in the previous analyses, having been bullied by other kids displayed the strongest negative influence on a respondent's eventual ranking. For each wave in which a respondent reported having been bullied, their ranking was reduced by 4 percent. On average, and net of the other events and controls, persistent bullying across the course of high school was therefore correlated with at least a 12 percent decrease in respondents' rankings. Furthermore, after accounting for bullying, a strong positive association appeared between reporting friendship problems and a respondent's ATAR performance. Each survey wave in which a respondent reported having friendship problems (other than problems which they considered to be bullying) was correlated with a 2 percent increase in their ATAR score at the end of high school. Having experienced bullying prior to high school displayed a significant negative association with ATAR scores once bullying during high school was accounted for.

To further illustrate how these different experiences corresponded with young people's post-schooling pathways, supplementary analysis was undertaken to estimate the relationships between bullying, friendship problems, and respondents' work/study status in wave 4 (i.e. three years following high school). Figures 1 and 2 display the marginal effect of these events on respondents' probability of being in one of four possible combinations of work and post-secondary study. Bullying predicts substantially lower odds of being engaged in both work and study, and higher odds of being only working, or neither working nor studying. While not as strong, these associations are reversed for those who reported friendship problems. Such findings are consistent with results from the main analysis, suggesting that the more immediate impacts of these events on respondents' educational attainment are likely to have longer-term ramifications for their labour market participation.

[FIGURES 1 & 2 ABOUT HERE]

Discussion

The aim of this paper has been to investigate the relationship between peer relationship events during high school and young Australians' educational attainment. To this end, we identified several associations between respondents' educational outcomes and their experiences of relationship events such as being bullied, falling in love and friendship problems. These associations were consistent for the two outcomes examined: (1) whether or not respondents received a generally competitive tertiary entrance ranking for that year (i.e. ATAR70+); and (2) the particular ranking achieved by those who received an ATAR.

Most of the events we examined were experienced at least once by a majority of the sample throughout high school. Even after controlling for contemporaneous changes, including health or family problems, moving schools, and the death of family members or friends, the role of peer relationship events stands out clearly and consistently in these analyses. The associations displayed for these events were of similar or larger magnitude than other well-established predictors of achievement, such as parental education and schooling sector, even when other student characteristics and baseline controls are present in the models. Although the associations are robust to the inclusion of these baseline measures, and they display the required temporal ordering of causal associations, our analyses are not sufficient to determine their causal direction. This leaves open the possibility that lower educational attainment or academic performance is the catalyst for, rather than the outcome of, these relationship events. Nonetheless, the findings highlight the potential for different peer relationship events to compound or ameliorate the effects of other processes of change during adolescent development and life pathway formation.

Prior work has highlighted the potential for peer networks to serve as ‘arenas of comfort’ during adolescence, offering young people a reprieve from changes occurring in elsewhere in their lives (Simmons et al., 1987; Call & Mortimer, 2001; Crosnoe & Elder, 2004). This research suggests a positive dimension of peer intimacy and influence resulting in ‘school-orientated’ friendships such as those developed through structured extra-curricular participation (Ream & Rumberger, 2008). However, our research acknowledges that young people encounter conflict alongside comfort in their peer relationships during high school, and this too may significantly affect their future trajectories.

For instance, romantic interest/involvement (i.e. ‘falling in love’) was negatively correlated with both the outcome measures. This association is unlikely to be attributable to romantic relationships which have since dissolved, as such break-ups were controlled for both during and prior to high school (i.e. ‘breaking up with a boyfriend or girlfriend’). Nor can the educational outcomes of those who ‘fell in love’ be entirely explained as a reflection of their more social, rather than academic, dispositions or priorities. Such orientations are accounted for in the analyses with measures of prior achievement, social involvement, and extracurricular participation. Soller’s (2014) ‘relationship inauthenticity’ thesis provides one possible interpretation of these findings because it directly concerns an individual’s orientation towards romantic involvement and relationship partners (potential or actual) during adolescence. At the core of this thesis is the idea that romantic relationships can create

a disjuncture between adolescents' own idealised identity roles and the identities they enact in order to win and maintain a partners' approval (Soller, 2014). While earlier research indicates that such conflict may adversely affect young people's mental health, the findings presented here suggest that academic performance may be similarly affected.

However, of all the events we examined, it was bullying which was most negatively associated with young people's educational attainment and post-schooling pathways. Respondents who said on each survey occasion that they had been bullied in the previous year were highly unlikely to receive an ATAR above 70 when compared against never-bullied students. Of those who received an ATAR, persistently bullied students performed 12 percent worse than never-bullied students. Previous research has shown a cross-sectional association between bullying and poor academic performance, and a longitudinal association between bullying and depression (Bond et al., 2001). Our research extends this work by illustrating a longitudinal association between bullying and young people's educational attainment at the end of high school, and a longer-term association with lower involvement in post-secondary work and study several years later.

If respondents' experiences of bullying and romance displayed the most potential to compound the stress of changes in adolescence, then their friendships may offer a reprieve from this stress. Respondents who experienced friendship problems were likelier to receive a competitive tertiary entrance rank, to rank significantly higher, and to become more engaged work and study after school, than those who did not experience such problems. That these associations remained when controlling for the number of close friends a respondent had, as well as their extracurricular involvement, suggests that this was not the positive influence of close ties between academically-inclined 'birds of a feather'. Rather, it suggests that young people who form robust friendships - the kind in which status and identity conflicts might be more easily tolerated and resolved - appear to benefit from the supportive role that such relationships have (Crosnoe & Elder, 2004; Giordano, 2003). This finding builds on existing research showing the importance of peer-based social capital for young people experiencing change or conflict in other life domains (Holland et al. 2007; Shildrick & Macdonald, 2008).

The young Australians in this study embarked on their post-schooling transitions at time when meritocratic discourses about schooling success and failure have been prevalent in the media (e.g. '*It's high time to foster meritocracy in education*' (Donnelly, 2013). Declaring an end to the 'age of entitlement', the conservative-led Federal Government has framed its proposed tightening of youth welfare eligibility as a means of encouraging

individual responsibility amongst young people (of the same cohort as those in our sample) for their own educational and occupational trajectories (Australian Government, 2014). The findings presented here are a timely reminder that many individual attributes which positively shape these trajectories, such as high self-esteem and a positive work ethic, are not formed in a social vacuum. Rather, the peer relationships young people develop at school, alongside their interactions with parents, teachers, and siblings, help to determine what they can achieve.

As with constructs of social capital focusing on dispositions or affiliations, the event-based measures examined here display socio-demographic variation. For instance, the mean number of reports of bullying, falling in love, and friendship problems, varies by gender, geographic region, and schooling sector (see Appendix A). Events such as bullying and falling in love are more common in rural areas and in State schools, while friendship problems are less common for males than for females. The higher rate of bullying in State schools noted here parallels recent findings of the Household Income and Labour Dynamics in Australia (HILDA) survey, another major longitudinal study examining a similar period (Wilkins, 2015). However, our findings should prompt consideration of a broader array of peer relationship dynamics, of which bullying is just one aspect. Educators and policymakers who are sensitive to these differing relationship dynamics and their associated trajectories will be best placed to intervene in ways that promote young people's educational resilience. Responses which attribute poor academic outcomes to young peoples' individual failings, such as a lack of effort or motivation, whilst disregarding the dynamics of comfort and conflict within their peer networks, risk compounding their educational vulnerabilities.

The present study has several limitations. First, the survey-based approach chosen here provides a longitudinal perspective of these events and their consequences, but it is no substitute for qualitative research exploring participants' own recollections and experiences of the developments in question. Second, due to limited space in the survey instrument, the event measures are necessarily approximations which do not capture the nature and frequency of the occurrences themselves. Finally, despite including appropriate socio-demographic controls to address the effects of sample attrition, we acknowledge some limitations on the generalisability of these findings. Given the higher-achieving tendency of the sample, the results may in fact underestimate the negative impacts of bullying and romantic involvement (and overstate the mitigating potential of friendships) in the actual population. By examining respondents' school-to-work transitions over a longer period, and including measures of their

mental health and subjective wellbeing, future waves of the Our Lives study will allow us to learn more about the nature of such experiences and their repercussions across the life course.

References

AUTHOR A

Australian Bureau of Statistics (ABS). 2011. *4221.0 – Schools, Australia 2011*. ABS: Canberra, ACT.

Australian Government. 2014. Budget fact sheet: Working age payments. Canberra: Department of Social Services.
http://www.dss.gov.au/sites/default/files/documents/05_2014/fact_sheet_-_working_age_payments_-_130514_1.pdf (accessed 13 August, 2015).

Billett, P. 2014. Dark cloud or silver lining? The value of bonding networks during youth. *Journal of Youth Studies*. <http://dx.doi.org/10.1080/13676261.2013.878787> (accessed 07 July, 2014)

Blomfeld, C. & Barber, B. 2011. Developmental experiences during extracurricular activities and Australian adolescents' self-concept: Particularly important for youth from disadvantaged schools. *Journal of Youth and Adolescence*. 40: 582-594.

Bond, L., Carlin, J. B., Thomas, L. Rubin, K. & Patton, G. 2001. Does bullying cause emotional problems? A prospective study of young teenagers. *British Medical Journal*. 323: 480-484.

Caldwell, B. J. (2010). Is private schooling becoming the preferred model of school choice in Australia? *Journal of School Choice*. 4(4): 378-397.

Call, K. T. & Mortimer, J. T. 2001. *Arenas of comfort in adolescence: A study of adjustment in context*. New Jersey: Lawrence Earlbaum.

Coleman, J. 1988. Social capital in the creation of human capital. *American Journal of Sociology*. 94 (Supplement): S95-S120.

Crosnoe, R. & Elder, G. H. 2004. Family dynamics, supportive relationships, and educational resilience during adolescence. *Journal of Family Issues*. 25(5): 571-602.

- Dearden, L., Ryan, C. & Sibieta, L. (2011). What determines private school choice? A comparison between the United Kingdom and Australia. *The Australian Economic Review*. 44(3): 308-320.
- Department of Education, Employment and Workplace Relations (DEEWR). 2011. Undergraduate applications, offers and acceptances, 2011. http://docs.education.gov.au/system/files/doc/other/undergraduateapplications2011_0.pdf (accessed 13 August, 2015).
- Dika, S.L. and Singh, K. 2002. Applications of social capital in educational literature: A critical synthesis. *Review of Educational Research*. 72:31-60.
- Donnelly, K. (2013) 'It's high time to foster meritocracy in education', *The Australian*, 17 August, 2014.
- France, A., Bottrell, D. & Haddon, E. 2013. Managing everyday life: The conceptualisation and value of cultural capital in navigating everyday life for working-class youth." *Journal of Youth Studies*. 16 (5): 597-611.
- Fredericks, J.A. and Eccles, J. S. 2006. Is extracurricular participation associated with beneficial outcomes? Concurrent and Longitudinal Relations. *Developmental Psychology*. 42 (4): 698-713.
- Fullarton, S. 2002. Student engagement with school: Individual and school-level influences, *Longitudinal Surveys of Australian Youth (LSAY)*. Australian Council for Educational Research (ACER), http://research.acer.edu.au/lsay_research/31 (accessed 07 July, 2014)
- Gilligan, R. 2000. Adversity, resilience and young people: The protective value of positive school and spare time experiences. *Children & Society*. 14: 37-47.
- Giordano, P. 2003. Relationships in adolescence. *Annual Review of Sociology*. 29: 257-281.
- Grills-Tauchel, A. E., Norton, P. & Ollendick, T. H. 2010. A longitudinal examination of factors predicting anxiety during the transition to middle school. *Anxiety, Stress & Coping: An International Journal*. 23(5): 493-513.
- Hines, A. M. 1997. Divorce-related transitions, adolescent development, and the role of the parent-child relationship: A review of the literature. *Journal of Marriage and Family*. 59(2): 375-388.

- Holland, J., Reynolds, T. & Weller, S. 2007. Transitions, networks and communities: The significance of social capital in the lives of children and young people. *Journal of Youth Studies*. 10 (1): 97-116.
- Houng, B. & Justman, M. 2014. NAPLAN scores as predictors of access to higher education in Victoria. *Melbourne Institute Working Paper No. 22/14*, Melbourne Institute of Applied Economic and Social Research.
- Jones, F. & McMillan, J. 2001. Scoring occupational categories for social research: A review of current practice, with Australian examples. *Work, Employment & Society*. 15(3): 539-563.
- Joyner, K. & Udry, J. R. 2000. You don't bring me anything but down: Adolescent romance and depression. *Journal of Health and Social Behavior*. 41(4): 369-391.
- Marks, G., Underwood, C., Rothman, S. & Brown, J. Career moves: Expectations and destinations of NSW secondary students. *Australian Council for Educational Research (ACER)*. http://research.acer.edu.au/transitions_misc/11 (accessed 13 August, 2015).
- Pellegrini, A. D. & Bartini, M. 2000. A longitudinal study of bullying, victimization, and peer affiliation during the transition from primary to middle school. *American Educational Research Journal*. 37(3): 699-725.
- Pham, C., Keenan, T. & Han, B. 2013. Evaluating impacts of early adolescent romance in high school on academic outcomes. *Journal of Applied Economics and Business Research*. 3(1):14-33.
- QLD Government. 2011. *Summary of Year 12 enrolment and certification (2010)*. QLD Studies Authority. <http://www.qsa.qld.edu.au/617.html> (accessed 13 August, 2015).
- QLD Studies Authority (QSA). 2010. 2010 Data summary: State distribution of Overall Positions and Field Positions. https://www.qcaa.qld.edu.au/downloads/publications/qa_stats_distribute_opfp_2010.pdf (accessed 13 August, 2015).
- Ream, R. K. & Rumberger, R. W. 2008. Student engagement, peer social capital, and school dropout among Mexican American and non-Latino white students. *Sociology of Education*. 81(2): 109-139.
- Robinson, L. 1999. The effects of part-time work on school students. *LSAY Research Reports*. Melbourne, VIC: Australian Council of Educational Research (ACER).

- Roche, K. M. & Ghazarian, S. R. 2012. The value of family routines for the academic success of vulnerable adolescents. *Journal of Family Issues*. 33(7): 874-897.
- Rothman, S. 2009. Estimating attrition bias in the Year 9 cohorts of the Longitudinal Surveys of Australian Youth: Technical report no. 48. *LSAY Technical Reports*. Australian Council of Educational Research (ACER).
- Rothon, C., Head, J. Klineberg, E. & Stansfeld, S. 2011. Can social support protect bullied adolescents from adverse outcomes? A prospective study on the effects of bullying on the educational achievement and mental health of adolescents at secondary schools in East London. *Journal of Adolescence*.34: 579-588.
- Semo, R. & Karmel, T. 2011. Social capital and youth transitions: Do young people's networks improve their participation in education and training? *National Centre for Vocational Education Research Occasional Paper*.
<http://files.eric.ed.gov/fulltext/ED524430.pdf> (accessed 13 August, 2015)
- Shildrick, T. A. & MacDonald, R. 2008. Understanding youth exclusion: Critical moments, social networks and social capital.” *Youth and Policy*. 99: 46-64.
- Simmons, R. G., Burgeson, R., Carlton-Ford, S. & Blyth, D. A. 1987. The impact of cumulative change in early adolescence. *Child Development*. 58(5): 1220-1234.
- Soller, B. 2014. Caught in a bad romance: Adolescent romantic relationships and mental health. *Journal of Health and Social Behavior*. 55(1): 56-72.
- StataCorp. 2013. *Stata Statistical Software: Release 13*. College Station, TX: StataCorp LP.
- Trapnell, P. 1994. Openness versus intellect: A lexical left turn. *European Journal of Personality*. 8(4): 273–90.
- Wang, J., Iannotti, R. & Nansel, T. 2009. School bullying among adolescents in the United States: Physical, verbal, relational, and cyber. *Journal of Adolescent Health*. 45: 258-375.
- White, A. M. & Gager, C. T. 2007. Idle hands and empty pockets? Youth involvement in extracurricular activities, social capital, and economic status. *Youth & Society*. 39(1): 75-111.
- Wilkins, R. 2015. The Household, Income and Labour Dynamics in Australia Survey: Selected findings from Waves 1 to 12. *Melbourne Institute of Applied Economic &*

Social Research

https://www.melbourneinstitute.com/downloads/hilda/Stat_Report/statreport_2015.pdf

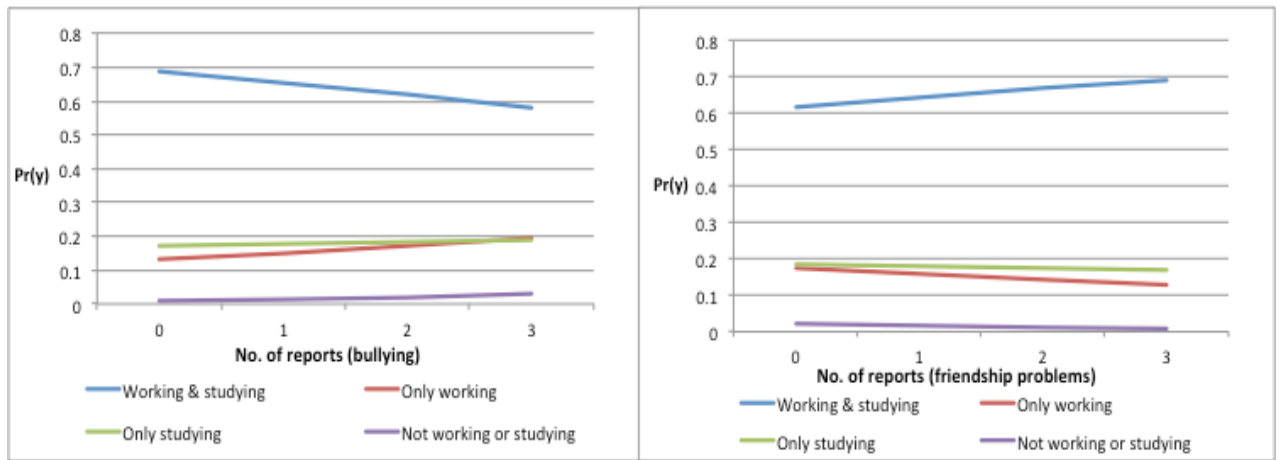
(accessed 13 August, 2015).

Winship, C. & Radbill, L. 1994. Sampling weights and regression analysis. *Sociological Methods & Research*. 23(2): 230-257.

Woolley, M. E. & Bowen, G. L. 2007. In the context of risk: Supportive adults and the school engagement of middle school students. *Family Relations*. 56(1): 92-104.

Wyn, J., Cuervo, H., Smith, G., & Woodman, D. 2010. *Young people negotiating risk and opportunity: post-school transitions 2005-2008*. Youth Research Centre, Research report 32. Melbourne: University of Melbourne.

Figures 1 & 2: Marginal effects of bullying and friendship problems on post-school work/study status[^]



[^]Obtained using MARGINS command in Stata following multinomial regression of post-school work/study status (all covariates in prior models held at their means).

Table 1: Frequency distributions for analytic variables

Variable	N	% / Mean (Std. Dev)
<i>All respondents</i>	1,612	--
<u>Dependent variables</u>		
<i>ATAR above 70</i>		
No	419	26.0%
Yes	1,193	74.0%
<i>Rank Achieved (99.95=Highest; 30 or below=Lowest)</i>	1,390	83.5 (12.3)
<u>Control variables</u>		
<i>Smart Scale (4-36)</i>	1,612	24.6 (7.1)
<i>Gender</i>		
Male (Ref.)	578	35.9%
Female	1,034	64.1%
<i>School sector</i>		
Government (Ref.)	695	43.1%
Independent	622	38.6%
Catholic	295	18.3%
<i>Geographic region</i>		
Urban (Ref.)	1,117	69.3%
Non-urban	495	30.7%
<i>Parental education (highest)</i>		
Bachelor's degree or higher (Ref.)	768	47.6%
Vocational	366	22.7%
Year 12 or less	431	26.7%
Don't know/Missing	47	2.9%
<i>Parental occ. prestige (0-100)</i>	1,612	61.2 (22.2)
<i>Worked during HS</i>		
Did not work (Ref.)	502	31.1%
Worked in Y10 only	172	10.7%
Worked in Y12 only	333	20.6%
Worked in Y10 & Y12	601	37.3%
Missing	4	0.3%
<i>Extracurricular part. (0-26)</i>	1,612	6.2 (4.3)
<i>No. of close friends (1-5)</i>	1,612	3.1 (1.0)

^Reference category

Table 2: Experiences of major life events during high school

Event	During HS (Waves 1-3)				Prior to HS	
	No reports	One report	Two reports	Three reports	No	Yes
Friendship problems	16%	24%	29%	32%	87%	13%
Fell in love	35%	32%	21%	12%	93%	7%
Death of family member/friend	37%	39%	19%	5%	53%	47%
Broke up with boyfriend/girlfriend	44%	27%	21%	8%	93%	7%
Family problems	43%	26%	20%	11%	92%	8%
Bullied by other kids	52%	27%	15%	7%	78%	22%
Serious health problems	78%	17%	5%	0%	84%	16%
Changed schools	80%	18%	2%	0%	n/a	n/a
Parents separated/divorced	95%	5%	0%	0%	87%	13%

Table 3: Logistic regression of odds of receiving an ATAR > 70

	(1)		(2)		(3)		(4)	
	O.R.	95% C.I.	O.R.	95% C.I.	O.R.	95% C.I.	O.R.	95% C.I.
Baseline controls								
<i>T1: Smart Scale (4-36)</i>	1.1***	(1.1, 1.1)	1.1***	(1.1, 1.1)	1.1***	(1.1, 1.1)	1.1***	(1.1, 1.1)
<i>T1: Broke up w/ partner before HS (0-1)</i>	0.7	(0.4, 1.1)	0.6	(0.4, 1.0)	0.6*	(0.3, 1.0)	0.5*	(0.3, 0.9)
Student characteristics								
<i>Gender</i>								
Male (Ref.)								
Female	1.6**	(1.2, 2.1)	1.7***	(1.3, 2.2)	1.5**	(1.1, 2.1)	1.4	(1.0, 1.9)
<i>Remoteness</i>								
Urban (Ref.)								
Rural	0.7*	(0.5, 1.0)	0.8	(0.6, 1.1)	0.8	(0.6, 1.1)	0.8	(0.6, 1.1)
<i>School sector</i>								
State school (Ref.)								
Independent school	2.8***	(1.9, 4.1)	2.1***	(1.5, 3.0)	2.1***	(1.5, 3.0)	2.0***	(1.4, 2.9)
Catholic school	1.3	(0.9, 1.9)	1.1	(0.8, 1.6)	1.1	(0.7, 1.6)	1.0	(0.7, 1.5)
<i>Work status during HS</i>								
Did not work (Ref.)								
Worked in Y10 only	0.7	(0.5, 1.1)	0.7	(0.4, 1.0)	0.8	(0.5, 1.2)	0.7	(0.5, 1.1)
Worked in Y12 only	0.7	(0.5, 1.0)	0.8	(0.5, 1.1)	0.8	(0.5, 1.2)	0.8	(0.6, 1.2)
Worked in Y10 & Y12	0.8	(0.6, 1.2)	0.9	(0.6, 1.2)	1.0	(0.7, 1.4)	1.0	(0.7, 1.4)
<i>Extracurricular part. (0-26)</i>	1.0	(1.0, 1.0)	1.0	(1.0, 1.0)	1.0	(1.0, 1.0)	1.0	(1.0, 1.0)
<i>No. of close friends</i>	0.9	(0.8, 1.1)	0.9	(0.8, 1.0)	1.0	(0.8, 1.1)	0.9	(0.8, 1.1)
Parental SES								
<i>Parental occ. prestige (0-100)</i>			1.01**	(1.0, 1.0)	1.01**	(1.0, 1.0)	1.01**	(1.0, 1.0)
<i>Highest parental edu.</i>								

Bachelor's or higher (Ref.)					
Vocational/Trade cert.	0.5***	0.3,0.6)	0.4***	(0.3, 0.6)	0.4*** (0.3, 0.6)
Year 12 or less	0.4***	0.3,0.6)	0.4***	(0.3, 0.6)	0.4*** (0.3, 0.6)
Missing/don't know	0.2***	0.1,0.4)	0.2***	(0.1, 0.4)	0.2*** (0.1, 0.4)
Events during HS (0-3)					
Friendship problems			1.2*	(1.0, 1.4)	1.4*** (1.2, 1.6)
Fell in love			0.8***	(0.7, 0.9)	0.8** (0.7, 0.9)
Death of family member/friend			0.8*	(0.7, 1.0)	0.8* (0.7, 1.0)
Broke up w/ partner			0.9	(0.8, 1.0)	0.9 (0.8, 1.0)
Family problems			0.8*	(0.7, 1.0)	0.9 (0.8, 1.0)
Changed schools (0-2)			0.7*	(0.5, 0.9)	0.7* (0.5, 1.0)
Serious health problems (0-2)			0.9	(0.7, 1.1)	0.9 (0.7, 1.2)
Parents separated (0-1)			1.6	(0.9, 2.9)	1.7 (0.9, 3.1)
Bullied during HS (0-3)					0.6*** (0.5, 0.7)
<i>No. of obs.</i>	1612	1612	1612	1612	
<i>Adj. R2</i>	0.142	0.184	0.211	0.229	
Exponentiated coefficients					
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$					

Table 4: OLS regression of tertiary entrance rank attained (0-100)

	(1)		(2)	
	b	se	b	se
Events during HS (0-3)				
Friendship problems	1.8*	0.8	1.7*	0.7
Fell in love	-2.6**	0.8	-2.5**	0.8
Death of family member/friend	-2.1**	0.7	-1.9**	0.7
Broke up with boyfriend/girlfriend	-1.9*	0.8	-0.9	0.7
Family problems	-2.3***	0.7	-1.8**	0.6
Bullied by other kids	-3.9***	0.8	-3.4***	0.8
Changed schools (0-2)	0.1	2.0	-0.0	1.9
Serious health problems (0-2)	0.0	1.1	-0.4	1.0
Parents separated/divorced (0-1)	1.2	2.6	2.6	2.7
Controls				
<i>Gender</i>				
Male (Ref.)				
Female			1.3	1.5
<i>School sector</i>				
State school (Ref.)				
Independent school			7.7***	1.5
Catholic school			1.6	2.2
<i>Remoteness</i>				
Urban (Ref.)				
Rural			-0.6	1.4
<i>Highest Parental Education</i>				
Bachelor's deg. or higher (Ref.)				
Vocational/Trade certificate			-6.0***	1.6
Year 12 or less			-7.4***	1.7
Missing/don't know			-13.8***	3.9
<i>Parental occ. prestige (0-100)</i>			1.0***	0.3
<i>Work status during HS</i>				
Did not work (Ref.)				
Worked in Y10 only			-0.3	1.8
Worked in Y12 only			-1.5	1.6
Worked in Y10 & Y12			-4.9**	1.6
<i>W1 Smart Scale (4-36)</i>	1.4***	0.1	1.4***	0.1
<i>Events before HS (0-10)</i>	-0.8	0.5	-1.0	0.5
Constant	30.1***	3.8	23.0***	4.1
No. of obs.	1391		1391	
Adj. R2	0.19		0.28	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^Reference category

Table 5: Socio-demographic differences in mean no. of reported events

	<i>Bullied</i>	<i>Fell in love</i>	<i>Friendship problems</i>
Male (Ref.)			
Female	No difference	- 20%***	+ 56%***
Urban			
Rural (Ref.)	+ 21%***	+ 13%***	+4%
State (Ref.)			
Independent	-27%***	-15%***	-6%**
Catholic	-28%***	-13%***	No difference

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^Reference category