

Levels of problem behaviours and risk and protective factors In suspended and non-suspended students

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Original Article

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External suspension from school is a common disciplinary practice in traditionally English-speaking countries. Few studies have sought student perceptions of school suspension, as well as measures of problem behaviours and emotional problems, and known factors that influence the development of antisocial behaviour, to examine associations between these variables. Three hundred and four adolescents, aged 12–17 years, from five schools in southern Australia completed a self-report questionnaire that asked about behavioural and mental health problems, and risk and protective factors known to be associated with suspension. Seventy-four of the participants had been previously suspended from school at least once. Having been previously suspended was associated with a greater level of problem behaviours and emotions, poor family management, low school commitment, reduced supportive teacher relationships, and interactions with antisocial peers. School suspension appears likely to be applied to students who lack the ability to self-regulate their behaviours and emotional problems in the classroom. By excluding students from school, pre-existing behavioural problems may be exacerbated by diminishing school protective factors and increasing exposure to known risk factors. Adolescents most at risk of being suspended would benefit from alternative school behaviour management policies and procedures that maintain the school as a protective factor.

Increasingly, governments are seeking to mitigate the long-term societal cost of adolescent problem behaviours (Beddington et al., 2013). These behaviours, which include substance use, violence, crime, and persistent rule violations cause acute physical damage to individuals, their property, and broader society through the cost of mental health and criminal justice interventions (Beardslee, Chien, & Bell, 2011; Hemphill, 1996). The prevalence of these problem behaviours is concerning, with studies showing between 10% and 20% of adolescents from traditionally English-speaking countries such as Australia, England, and the United States have mental health problems (Kessler et al., 2012; Lawrence et al., 2015) and engage in violent and antisocial behaviour (Hemphill et al., 2009; World Health Organization, 2018).

The long-term effects associated with problem behaviours originating in childhood and adolescence can be seen to have negative impacts at both a societal and an individual level. Diminished mental capital (an individual's cognitive and emotional potential to contribute to society) is a considerable societal burden due to reduced workforce participation, greater reliance on welfare, and increased pressure on healthcare systems (Beddington et al., 2013). At the individual level, lost mental capital contributes to lower living standards, reduced earning capacity, and lower educational attainment (Beddington et al., 2013; Gibb, Fergusson, & Horwood, 2010; Lansford, Dodge, Pettit, & Bates, 2016).

Effective prevention and early intervention aims to reduce risk factors and increase protective factors. Risk factors increase the likelihood an individual will develop a problem behaviour or undesirable outcome (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002; Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995). Protective or health enhancing factors decrease the likelihood of problematic behaviours and undesirable outcomes (Jessor, Turbin, & Costa, 1998). These risk and protective factors can be categorised into the domains of family, school, community peer groups, and individual (Arthur et al., 2002), and consequently give guidance for areas of focus for prevention and early intervention.

School engagement is an influential protective factor in which a student's emotional commitment and active engagement in school can influence the student to adopt the prosocial behaviours and attitudes of the school (Chase, Warren, & Lerner, 2015). Alternatively, the school's response to problem behaviours can lead to alienation and exacerbate pre-existing problems with origins outside of the school (Hemphill, Plenty, Herrenkohl, Toumbourou, & Catalano, 2014). While there is some level of uncertainty regarding the causal relationship between school engagement and problem behaviours (Wang & Fredricks, 2013), a strong association is consistently found between low school engagement and antisocial behaviour, academic failure, and reduced mental health (Hemphill, Toumbourou, Herrenkohl, McMorris, & Catalano, 2006; Kang-Yi et al., 2018; Kearney & Hendron, 2016).

An engaging school environment includes students' positive relationships with teachers and peers, a perceived relevant and achievable curriculum, and opportunities for involvement and belonging in school (Fredricks, Blumenfeld, & Paris, 2004; Fredricks, Filsecker, & Lawson, 2016). The challenge for schools is in establishing and maintaining an engaging climate, not just for students that exhibit predominately positive behaviours, but also for those who are displaying problem behaviours and are at risk of becoming disengaged from school. Research has demonstrated that teachers with effective behaviour management strategies, engaging instructional techniques, high expectations of students, and expectations of parental involvement in school can act as a protective factor for students from low socio-economic backgrounds (Berkowitz, Moore, Astor, & Benbenishty, 2017).

Student classroom misbehaviour is of concern due to the potential for the loss of time dedicated to academic tuition (Little, 2005). Within Australia, England and the United States, out-of-school or external suspension (temporary removal of the student from school for a fixed period) is a common disciplinary response to students who display disruptive behaviour (Department for Education, 2015; Graham, 2018; Noltemeyer, Ward, & McLoughlin, 2015). Proponents of school suspension argue that the suspension of a student sends a clear message to the school community that student misbehaviour will not be tolerated and acts as a deterrent and punishment (American Academy of Pediatrics, 2003).

Longitudinal research has shown that school suspension can increase the likelihood of future suspensions and have a negative impact upon the likelihood of graduation (Noltemeyer et al., 2015). Other academic outcomes such as reading achievement are negatively associated with school suspension rates (Arcia, 2006). In addition, school suspension has been shown to increase the likelihood of future antisocial behaviour, as well as tobacco use and violence (Hemphill, Heerde, Herrenkohl, Toumbourou, & Catalano, 2011; Hemphill et al., 2006). Of particular concern is the potential for adverse school events such as suspension to contribute to the 'school to prison pipeline' (Mallett, 2016)

Students with emotional disorders are over-represented among suspended students (Goran & Gage, 2011; Sullivan, Van Norman, & Klingbeil, 2014). Further to these student factors, multilevel analysis has demonstrated that school-level factors predict the likelihood of a student being suspended (Hemphill et al., 2014; Theriot, Craun, & Dupper, 2010). In Australia, Hemphill et al. (2010) demonstrated that schools in low socio-economic status area are more likely to suspend students, even when analyses controlled for individual and family factors.

A small number of studies have sought students' perceptions of school suspension (Costenbader & Markson, 1998; Quin & Hemphill, 2014) and have directly compared suspended and non-suspended students on a range of measures of mental health and school, family, and peer group risk and protective factors. It is only by further exploring the factors that contribute to discipline outcomes such as suspension that schools can attempt to provide the engaging environment so essential for the wellbeing of all students. The current study aims to address this knowledge gap by measuring the extent to which external school suspension is associated with mental health problems and heightened levels of risk factors and diminished protective factors in the domains of school, family, and peer group.

When comparing previously suspended students to their never suspended peers, two predictions were made. First, students who have been suspended would report higher levels of problem

behaviours and emotional problems than their peers who have never been suspended. Second, that school engagement would be diminished among previously suspended students relative to their non-suspended peers. Additionally, by comparing family and peer group risk and protective factors between suspended and non-suspended students, the potential implications of school suspension for suspended students can be discussed.

Method

Participants

Sixteen schools in southern Australia were approached to participate in the study. The five schools (31%) whose principals agreed to participate included a metropolitan Catholic school with a majority (69%) of students identifying as Asian, an inner metropolitan state school, an outer metropolitan state school, a rural independent school and an alternative campus, a rural Catholic school. The alternative campus specifically caters for students who have often been suspended or excluded from mainstreams schools. In total, 430 students were eligible for participation, with 309 (72%) students having gained parental consent and provided assent for their own participation.

Instruments

The measurement tool consisted of two sections. The second section asked participants to report on their experiences of suspension and was reported upon elsewhere (Quin & Hemphill, 2014). The current article pertains to the measures reported upon below.

Suspension

Participants were required to answer the question: 'How many times have you been externally suspended from school (i.e., asked not to attend school for a period of time)?' This definition was also clarified verbally. Response options included *never*, 1–3, or *more than 3*.

Problem behaviours and emotional problems

Participants completed a self-report behavioural screening tool, the Strengths and Difficulties Questionnaire (SDQ) version for 11- to 16-year-olds (Goodman, 2001; Goodman, Meltzer, & Bailey, 1998). The SDQ has been shown to have good reliability and validity (Goodman, 2001), and within Australian samples has been shown to have Cronbach alphas above .70 (Maybery, Reupert, Goodyear, Ritchie, & Brann, 2009). The SDQ was used to measure problem behaviours, emotional symptoms, and prosocial behaviours. This measurement tool contains 25 items scored on a 3-point scale: *not true* = 0, *somewhat true* = 1 and *certainly true* = 2; for example, 'I worry a lot', 'I am kind to younger children' and 'I think before I do things'. A 'total difficulties score' is obtained from 20 of the items and the remaining 5 items total to form a 'prosocial behaviour score'. Each score was dichotomised at the recommended separation between 'normal' and 'borderline' (Goodman et al., 1998).

Risk and protective factors

The eight risk and protective factors were drawn from the Communities that Care (CTC) survey (Arthur et al., 2002; Glaser, Horn, Arthur, Hawkins, & Catalano, 2005). Previous Australian and international studies have calculated the average Cronbach alphas for the scales used here as above .70 (Bond, Thomas, Toumbourou, Patton, & Catalano, 2000). The risk factors

Table 1 Participant Demographics

	Participants (n)	Age (SD)	Gender (%)		Suspension (%)		EMA (%)		Ethnicity (%)						
			Male	Female	Never	1 or more	Yes	No	African	Aboriginal	Spanish	Asian	Pacific Is.	Anglo	Other
All schools	304	14.71 (1.06)	54.6	45.4	75.7	24.3	28.9	71.1	5.7	2.4	2.4	44.6	2.7	24.3	17.9
Independent, urban	157	15.39 (.49)	56.1	43.9	83.4	16.6	24.2	75.8	4.5	0	3.2	69.4	1.9	10.8	10.2
State, urban	40	14.10 (1.21)	42.5	57.5	85	15	57.5	42.5	0	0	0	17.5	0	32.5	45
State, urban	58	13.59 (.75)	56.9	43.1	77.6	22.4	12.1	87.9	17.2	3.4	1.7	27.6	3.4	27.6	19
Independent, rural	23	14.43 (.84)	39.1	60.9	87	13	4.3	95.7	0	0	4.3	0	0	82.6	0
Alternative	26	14.31 (1.12)	73.1	26.9	0	100	73.1	26.9	0	19.2	0	0	11.5	26.9	30.8

Note. Is = Islander; EMA = Educational Maintenance Allowance (financial assistance provided to students from low income families)

'poor family management' (e.g., 'The rules in my family are clear') and 'family conflict' (e.g., 'People in my family have serious arguments') and the protective factor 'opportunities for prosocial involvement' (e.g., 'My parents give me lots of chances to do fun things with them') from the family domain were included. Each of these were scored on a 4-point scale, ranging from *definitely no* to *definitely yes*. Items for the community risk factor 'transitions and mobility' had a Yes or No response option (e.g., 'Have you changed homes in the past year?'). In the school domain 'low commitment to school' (e.g., 'How interesting are most of your school subjects to you?'), a risk factor, contained items coded to have a 5-point range indicating the frequency with which a behaviour or attitude occurred. Two school protective factors, 'supportive teacher relationships' (e.g., 'My teachers are fair in dealing with students') and 'belonging/ acceptance' (e.g., 'I can really be myself at this school') were measured on a 4-point scale, ranging from *definitely no* to *definitely yes*. The risk factor 'interaction with antisocial peers' (e.g., 'In the past year, how many of your friends have been suspended from school?') was rated on a 5-point scale ranging from *none of my friends* to *4 of my friends*. The score for each risk and protective factor was dichotomised at the mid-point of its respective range.

Dichotomisation was appropriate for the measures utilised, as consistent with previous research into problem behaviours and risk factors the distribution of scores revealed few participants reporting high levels of problem behaviours or risk factors (Farrington & Loeber, 2000). Dichotomisation also has the added benefit of improving the interpretation of results for a wide audience without causing a decrease in the measured associations (Farrington & Loeber, 2000).

Procedure

Ethics approval to conduct the research was granted by the Australian Catholic University Human Research Ethics Committee. Approval to approach principals to request permission to conduct research in their schools was provided by the Department of Education and Early Childhood and the Catholic Education Office Melbourne.

The schools approached to participate were a convenience sample, chosen because the researchers had a prior relationship with a staff member at the school or they were in close proximity to the researchers' workplace. The principals who declined to participate cited time constraints for non-participation.

The principal (or their delegate) identified a single year level between Year 7 and Year 10 for participation. Intact classes that were timetabled in a traditional classroom and could be surveyed in one day were invited to participate. Students in these classes were given an information letter and consent form to request written parental permission to participate in the study.

Questionnaires were administered in August and September 2011 by the principal investigator. Participants completed the questionnaire in their regular timetabled school class of 40–50 minutes' duration, with the teacher present at the side of the classroom.

Data Analysis

Of the 309 students eligible for participation, five were excluded from the study due to irregular patterns of answers on the questionnaire. A summary of the demographics of the included participants is shown in Table 1.

Missing data for each individual item in the questionnaire was less than 2%. At the individual case level, when a CTC or SDQ variable had not more than 33% (Arthur et al., 2002) or 40% (Goodman, 2011) respectively of missing data a mean value for each case was calculated. This had no impact on statistical results.

First, Pearson's chi-square analyses were conducted to test the association between being suspended from school or not with the 10 variables measured. Due to the multiple comparisons made, a Bonferroni adjustment was applied, $\alpha = .005$. As a measure of effect size, the odds ratio was calculated when a statistically significant association was found. Second, two separate unadjusted logistic regression analyses were conducted to examine the associations between the 10 independent variables and school suspension. All statistical analysis was performed with the software package SPSS (IBM Corp, 2013).

Results

All students attending the alternative school had been previously suspended (Table 1). These students reported higher levels of problem behaviours and emotions and risk factors, and lower levels of protective factors (Table 2). Due to the potential for the students attending the alternative school to skew the hypothesised associations with suspension, two separate analyses were conducted: the first with all participants in the study and the second excluding the 26 students attending the alternative school.

Table 2 Mean (SD) Levels of Problem Behaviours and Emotions and Risk and Protective Factors by School and Suspension Group

		Individual			Family			School		Peer	
		Total diffc.	Prosocial behaviors	Transitions	Family manage.	Family conflict	Prosocial opport.	Commit. school	belonging	Supportive teachers	Antisocial peers
School	All schools	11.87 (5.70)	7.23 (1.78)	1.18 (.31)	1.77 (.53)	2.39 (.77)	2.90 (.72)	2.05 (.56)	3.07 (.49)	2.79 (.54)	.52 (.76)
	Independent, urban	11.50 (5.16)	7.43 (1.65)	1.11 (.23)	1.8 (.51)	2.36 (.77)	2.77 (.71)	1.96 (.42)	3.01 (.44)	2.81 (.48)	0.37 (.51)
	State, urban	10.77 (5.53)	7.45 (1.89)	1.16 (.29)	1.47 (.42)	2.30 (.74)	3.18 (.74)	1.97 (.59)	3.17 (.56)	2.67 (.77)	0.57 (.84)
	State, urban	10.41 (5.69)	7.17 (1.79)	1.21 (.33)	1.70 (.51)	2.33 (.76)	3.14 (.61)	1.93 (.48)	3.16 (.49)	2.82 (.51)	.41 (.57)
	Independent, rural	12.78 (5.87)	7.30 (1.79)	1.24 (.37)	1.74 (.35)	2.51 (.82)	3.00 (.52)	2.26 (.44)	2.93 (.45)	2.73 (.48)	.26 (.24)
	Alternative	18.27 (4.98)	5.77 (1.82)	1.52 (.39)	2.27 (.64)	2.82 (.66)	2.67 (.81)	2.81 (.85)	2.80 (.64)	2.80 (.61)	1.79 (1.24)
Suspension	Never	11.08 (5.45)	7.47 (1.68)	1.14 (.28)	1.70 (.48)	2.33 (.77)	2.92 (.70)	1.93 (.45)	3.11 (.45)	2.85 (.50)	.31 (.44)
	One or more	14.34 (5.77)	6.50 (1.91)	1.27 (.36)	1.99 (.64)	2.58 (.75)	2.86 (.78)	2.41 (.72)	2.91 (.59)	2.60 (.63)	1.16 (1.11)
Cronbach's alpha		.79	.60	.46	.81	.77	.75	.78	.80	.83	.91

Note. diffc = difficulties; manage = management; opport = opportunities; commit = commitment.

Table 3 Associations Between School Suspension and Problem Behaviours and Emotions and Risk and Protective Factors

	Odds ratio	
	All schools	Alternative school excluded
Individual		
Total difficulties	2.72 [1.54, 4.82]*	1.11 [.52, 2.40]
Prosocial behaviors	1.86 [.99, 3.50]	1.08 [.47, 2.50]
Family		
Transitions	2.83 [1.17, 6.84]	.79 [.17, 3.63]
Family management	3.29 [1.47, 7.37]*	1.40 [.44, 4.46]
Family conflict	1.21 [.71, 2.05]	.81 [.42, 1.53]
Prosocial opportunities	1.00 [.56, 1.81]	.62 [.28, 1.37]
School		
Commitment to school	5.00 [2.73, 9.14]*	3.15 [1.53, 6.50]*
Belonging	3.04 [1.34, 6.90]	2.22 [.80, 6.06]
Supportive teachers	2.78 [1.54, 5.10]*	3.24 [1.63, 6.41]*
Peer		
Antisocial peers	31.45 [7.03, 140.65]*	16.29 [3.18, 3.44]*

Note: Protective factors prosocial opportunities, belonging and supportive teachers transformed to risk factors for ease of interpretation.*significant at .005 level. 95% confidence intervals shown in square brackets.

Age and gender

Boys were more likely to report having been suspended. The percentage of boys in the sample was 55% and this figure increased to 80% of the suspended students. Chi-square analysis showed that gender had a statistically significant relationship with suspension status, $\chi^2(1) = 24.91, p < .001$. An independent samples *t* test indicated that there was no significant age difference between those students who had been suspended and the students who had not been suspended, $t(302) = .70, p = .48$.

Problem behaviours and emotional problems

The percentage of students in the never suspended group with a score on the SDQ that fell below the cut point of 'borderline'

was 19%. This proportion increased to 39% in the group of students who have been suspended. Chi-square analysis showed a statistically significant relationship between the total difficulties score and whether or not a student was suspended, $\chi^2(1) = 12.35, p < .001$. The odds ratio indicated the odds of a student having been suspended were 2.72 times higher if they reported problem behaviours and emotional problems, as measured by the SDQ (Table 3). This association was only statistically significant when the students from the alternative school were included in the analysis.

Risk and protective factors

There was a statistically significant relationship between poor family management practices and whether a student had been

Table 4 Multivariate Associations With Suspension

	All students OR	Alternative school students excluded OR
Individual		
Total difficulties	1.47 [.71, 3.05]	.79 [.31, 1.97]
Prosocial behaviors	1.21 [.57, 2.58]	.93 [.37, 2.34]
Family		
Transitions	1.67 [.56, 4.96]	.74 [.14, 3.79]
Family management	1.69 [.59, 4.85]	1.29 [.32, 5.16]
Family conflict	.97 [.52, 1.81]	.78 [.38, 1.60]
Prosocial opportunities	.73 [.34, 1.56]	.52 [.21, 1.31]
School		
Commitment to school	2.39 [1.10, 5.19]*	2.23 [.90, 5.56]
Belonging	1.20 [.41, 3.57]	1.59 [.46, 5.26]
Supportive teachers	1.67 [.81, 3.45]	2.27 [1.04, 5.00]*
Peer		
Antisocial peers	17.86 [3.73, 85.53]*	13.94 [2.33, 83.30]*
Model	$\chi^2(10) = 57.30, p < .01$	$\chi^2(10) = 28.23, p < .01$
-2LL	276.75	227.20
R ²	.26	.16

Note: Protective factors prosocial opportunities, belonging and supportive teachers transformed to risk factors for ease of interpretation.* $p < .05$. 95% confidence intervals shown in square brackets.

suspended or not, $\chi^2(1) = 9.12, p = .003$. Poor family management practices were present in 18% of the previously suspended students and 6% of the never suspended group. The odds of a student having being suspended were 3.29 times greater if they had poor family management practices. Further analysis demonstrated this association to be not statistically significant when the students attending the alternative school were excluded.

Commitment to school had a statistically significant relationship with whether a student had been suspended or not, $\chi^2(1) = 30.31, p < .001$. Of the previously suspended students, 42% reported a low commitment to school. In contrast, 13% of students who had never been suspended reported a low commitment to school. The odds ratio indicated that the odds of being suspended increased by 5.00 if a student has low commitment to school. The odds ratio decreased to 3.15 when the students attending the alternative school were excluded; however, the association remained statistically significant.

Also in the school domain, supportive teacher relationships had a statistically significant relationship with the suspension group, $\chi^2(1) = 11.92, p = .001$. A higher percentage of never suspended students (84%) reported supportive teacher relationships than previously suspended students (64%). The odds ratio shows that if a student reports lower levels of support from their teacher, they are 2.78 times more likely to have been suspended. This association remained statistically significant when the students attending the alternative school were removed from the analysis.

Only 1% of the never suspended group reported regular interactions with antisocial friends. This figure increased to 22% among previously suspended students. The 2×2 contingency table for interaction with antisocial peers expected the previously suspended group to have a frequency of less than five. Therefore, Fisher's exact test (two-sided) was conducted to assess the relationship between the suspension group and interaction with antisocial peers. A statistically significant association between being

suspended or not and level of interaction with antisocial peers was found, $p < .001$. The odds ratio shows that if a student interacts with antisocial peers, they are 31.45 times more likely to have been suspended. The odds ratio decreased to 16.29 when the students attending the alternative school were excluded from the analysis; however, it remained statistically significant.

Multivariate associations with school suspension

The results of the two logistic regression analyses to ascertain the effects of the two problem behaviours and problem emotions variables, and eight risk and protective factors on school suspension are shown in Table 4. In the analysis of all 304 students in the sample, only the students' reported commitment to school and interaction with antisocial peers had statistically significant associations with school suspension. The analysis, which excluded the students attending the alternative school interaction with antisocial peers, was again associated with school suspension. Commitment to school was no longer related statistically significantly to school suspension, but student report of supportive teachers was statistically significant for the students attending the four mainstream schools.

Discussion

This study is unique to Australia in that it utilised student self-report of problem behaviours and emotions and risk and protective factors in relation to an experience unique to school, school suspension. The main findings were that previously suspended students, relative to non-suspended students, were more likely to be male, reported more problem behaviours and experienced more negative emotions, were less committed to school, and reported less supportive teacher relationships. Further, suspended students experienced more poor family management practices and reported having a greater number of antisocial friends than their never suspended peers.

The demonstrated association between suspension and problem behaviours and negative emotions is consistent with research in the United States (Goran & Gage, 2011; Sullivan et al., 2014). While this association was not replicated when the students attending the alternative school were excluded from the analysis, the relationship gives rise to two potential explanations. First, that students with pre-existing problem behaviours commensurate with emotional and behavioural disorders are more likely to be suspended. Second, that suspension increases the likelihood of problem behaviours and emotional problems. Within Australia there is a lack of knowledge regarding the backgrounds of students enrolled in alternative school settings (Van Bergen, Graham, Sweller, & Dodd, 2015).

This study is cross-sectional and cannot demonstrate causation. However, it has been previously shown that one of the factors that reduces the likelihood of antisocial behaviour is an ability to control emotions in difficult situations (Hemphill et al., 2006). In this context, with an awareness of adolescent mental health prevalence and its perceived impact on school activities (Lawrence et al., 2015), it appears that if a student is unable to self-regulate their behaviours and emotions to that of the level expected in the classroom, then a common intervention strategy is suspension. Intervention in this manner can be framed as positive disciplinary intervention intended to achieve behaviour change in the student. Or, as has been acknowledged, suspension can be employed in a systematic way to remove and punish disruptive or low achieving students.

The finding that suspension is associated with student-reported low commitment to school and lower levels of supportive teacher relationships is consistent with research demonstrating that good school connectedness is associated with both positive school outcomes and good mental health (Salle Tamika, George Heather, Betsy, Polk, & Evanovich, 2018; Walker & Graham, 2019). Furthermore, being male, academic failure and exclusionary practices such as suspension have been identified as crucial components in the 'school to prison pipeline', with the majority of adolescents involved in the court system being exposed to these school-level risk factors (Hemphill et al., 2014; Mallett, 2016). It should be acknowledged that a student who completes set classwork, responds to teacher instruction, and conforms to the implicit and explicit social norms of the school environment is less likely to be suspended (Arcia, 2006). However, the first effect of suspension is loss of instruction time and the potential positive normative effects of the classroom environment and the school as a protective factor against problem behaviours. The ability of the teacher to form a positive relationship and respond to not only the curriculum requirements but also the socio-emotional needs of the student is an acknowledged key factor in academic success (Quin, 2017). Suspension can also result in suspended students experiencing a negative stigma from the school environment (Costenbader & Markson, 1998; Quin & Hemphill, 2014), further diminishing school engagement.

The current study found that students who have been suspended are more likely to report poor family management practices. Thus, schools with well-established discipline policies and procedures are attempting to elicit parental support from families that lack the same clear expectations (Hemphill et al., 2011; Herrenkohl et al., 2000). Ideally, the parental response to any problem behaviour resulting in suspension would be authoritative. Authoritative parenting, a parenting style that is warm and accepting, clear in behavioural supervision and democratic, has been shown to predict parental involvement in school and adolescent

school achievement (Steinberg, Lamborn, Dornbusch, & Darling, 1992). If school as a protective factor against problem behaviours is diminished via suspension, through either loss of classroom contact or reduced school engagement, then the role of the family, peers, and community become even more influential. The demonstrated association between suspension and poor family management suggests that an authoritative parental response to suspension is unlikely.

The finding that students who have been suspended report having a greater number of interactions with antisocial friends is informative when seeking to explain why school suspension exacerbates antisocial behaviour (Hemphill et al., 2006). It is possible that suspension provides the opportunity for antisocial interaction on the day of suspension, and increasingly, evidence suggests that public policy interventions that segregate antisocial peers are inadvertently harmful (Gifford-Smith, Dodge, Dishion, & McCord, 2005). Alternatively, it has been proposed that suspension may contribute to students further rebelling and seeking out like-minded antisocial peers for socialisation (Hemphill et al., 2011).

Strengths and Limitations of the Study

A major strength of this study is that it is one of the first to concurrently measure student report of school experiences on established measures of mental health and risk and protective factors in a sample of suspended and non-suspended students. Even though future research would benefit from a larger sample of schools, the inclusion of students from an alternative school in the sample is a further strength. The requirement for entry into the alternative school could be broadly classed as 'disengaged'; however, the current study provides direction for more detailed analysis. A larger sample could explore in individual schools the management of disruptive behaviours and the application of suspension. Schools exercise considerable discretion in this regard.

This study was cross-sectional. Thus, it cannot be concluded that suspension contributes to the demonstrated levels of problem behaviours and negative emotions, diminished school engagement, increased family management problems, and a greater number of antisocial friends or vice versa. The potential for school suspension to contribute to mental health problems, in particular, in the way that suspension has been demonstrated to be a predictor of future antisocial behaviour (Hemphill et al., 2011; Hemphill et al., 2006) should be explored in longitudinal studies.

Generally for adolescent problem behaviours that are not readily observable, self-report data is considered reliable and the most appropriate way to measure these behaviours (Goodman et al., 1998; Jolliffe et al., 2003). Within Australia, official school data such as suspension numbers are not readily available to researchers. Future research in this area would benefit from including both student self-report and external data sources such as official school data and parent and teacher report.

Only external suspension and its presence or absence was recorded, and no time frame was specified regarding the recency of the suspension received. To the best of the author's knowledge, the implications of potential cumulative effects or time effects of suspensions are yet to be explored in other studies. Similarly, it has been recommended that future research should explore the outcomes of alternative programs such as internal suspension and restorative practices (Skiba et al., 2008).

Conclusions

Suspension has an intuitive appeal for the maintenance of school discipline by providing prompt relief to teachers, school leadership, and students engaged in academic learning. This study viewed suspension from the perspective of suspended students and presented a different picture. The current practice of school suspension may not be recognising that a minority of students lack the social and emotional skills to consistently regulate their behaviour to the level expected in the classroom. These students who have the most to gain from being engaged in school are being exposed to known risk factors for antisocial behaviour and academic failure via the application of suspension.

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References

- American Academy of Pediatrics. (2003). Out-of-school suspension and expulsion. *Pediatrics*, *112*, 1206–1209.
- Arcia, E. (2006). Achievement and enrollment status of suspended students. *Education and Urban Society*, *38*, 359–369.
- Arthur, M.W., Hawkins, J.D., Pollard, J.A., Catalano, R.F., & Baglioni, A.J. (2002). Measuring risk and protective factors for substance use, delinquency, and other adolescent problem behaviors: The Communities That Care youth survey. *Evaluation Review*, *26*, 575–601.
- Beardslee, W.R., Chien, P.L., & Bell, C.C. (2011). Prevention of mental disorders, substance abuse, and problem behaviors: A developmental perspective. *Psychiatric Services*, *62*, 247–254.
- Beddington, J., Cooper, C.L., Field, J., Goswami, U., Huppert, F.A., Jenkins, R., ... Thomas, S.M. (2013). The mental wealth of nations. In C.L. Cooper (Ed.), *From stress to wellbeing volume 2: Stress management and enhancing wellbeing* (pp. 271–279). London, UK: Palgrave Macmillan.
- Berkowitz, R., Moore, H., Astor, R.A., & Benbenishty, R. (2017). A research synthesis of the associations between socioeconomic background, inequality, school climate, and academic achievement. *Review of Educational Research*, *87*, 425–469.
- Bond, L., Thomas, L., Toumbourou, J.W., Patton, G.C., & Catalano, R.F. (2000). Improving the lives of young Victorians in our community: A survey of risk and protective factors. Retrieved from http://ercweb.rch.org.au/cah/Improving_the_lives_of_young_Victorians.pdf
- Chase, P.A., Warren, D.J.A., & Lerner, R.M. (2015). School engagement, academic achievement, and positive youth development. In P.E. Bowers, J.G. Geldhof, K.S. Johnson, J.L. Hilliard, M.R. Hershberg, V.J. Lerner, and M.R. Lerner (Eds.), *Promoting positive youth development: Lessons from the 4-H study* (pp. 57–70). Cham, Switzerland: Springer International Publishing.
- Costenbader, V., & Markson, S. (1998). School suspension: A study with secondary school students. *Journal of School Psychology*, *36*, 59–82.
- Department for Education. (2015). *Permanent and fixed period exclusions from schools and exclusion appeals in England, 2013 to 2014*. London, UK: Author. Retrieved from www.gov.uk/government/statistics
- Farrington, D.P., & Loeber, R. (2000). Some benefits of dichotomization in psychiatric and criminological research. *Criminal Behaviour and Mental Health*, *10*, 100–122.
- Fredricks, J.A., Blumenfeld, P.C., & Paris, A.H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, *74*, 59–109.
- Fredricks, J.A., Filsecker, M., & Lawson, M.A. (2016). Student engagement, context, and adjustment: Addressing definitional, measurement, and methodological issues. *Learning and Instruction*, *43*, 1–4.
- Gibb, S.J., Fergusson, D.M., & Horwood, L.J. (2010). Burden of psychiatric disorder in young adulthood and life outcomes at age 30. *The British Journal of Psychiatry*, *197*, 122–127.
- Gifford-Smith, M., Dodge, K.A., Dishion, T.J., & McCord, J. (2005). Peer influence in children and adolescents: Crossing the bridge from developmental to intervention science. *Journal of Abnormal Child Psychology*, *33*, 255–265.
- Glaser, R.R., Horn, M.L.V., Arthur, M.W., Hawkins, J.D., & Catalano, R.F. (2005). Measurement properties of the Communities That Care youth survey across demographic groups. *Journal of Quantitative Criminology*, *21*, 73–102.
- Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry*, *40*, 1337–1345.
- Goodman, R. (2011). SDQ: Generating scores in SPSS. Retrieved from <http://www.sdqinfo.org/c1.html>
- Goodman, R., Meltzer, H., & Bailey, V. (1998). The Strengths and Difficulties Questionnaire: A pilot study on the validity of the self-report version. *European Child and Adolescent Psychiatry*, *7*, 125–130.
- Goran, L.G., & Gage, N.A. (2011). A comparative analysis of language, suspension, and academic performance of students with emotional disturbance and students with learning disabilities. *Education and Treatment of Children*, *34*, 469–488.
- Graham, L.J. (2018). Questioning the impacts of legislative change on the use of exclusionary discipline in the context of broader system reforms: A Queensland case-study. *International Journal of Inclusive Education*, 1–21.
- Hemphill, S.A. (1996). Characteristics of conduct-disordered children and their families: A review. *Australian Psychologist*, *31*, 109–118.
- Hemphill, S.A., Heerde, J.A., Herrenkohl, T.I., Toumbourou, J.W., & Catalano, R.F. (2011). The impact of school suspension on student tobacco use: A longitudinal study in Victoria, Australia, and Washington State, United States. *Health Education & Behavior*, *39*, 45–56.
- Hemphill, S.A., Plenty, S.M., Herrenkohl, T.I., Toumbourou, J.W., & Catalano, R.F. (2014). Student and school factors associated with school suspension: A multilevel analysis of students in Victoria, Australia and Washington State, United States. *Children and Youth Services Review*, *36*, 187–194.
- Hemphill, S.A., Smith, R., Toumbourou, J.W., Herrenkohl, T.I., Catalano, R.F., McMorris, B.J., & Romaniuk, H. (2009). Modifiable determinants of youth violence in Australia and the United States: A longitudinal study. *Australian and New Zealand Journal of Criminology*, *42*, 289–309.
- Hemphill, S.A., Toumbourou, J.W., Herrenkohl, T.I., McMorris, B.J., & Catalano, R.F. (2006). The effect of school suspensions and arrests on subsequent adolescent antisocial behavior in Australia and the United States. *Journal of Adolescent Health*, *39*, 736–744.
- Hemphill, S.A., Toumbourou, J.W., Smith, R., Kendall, G.E., Rowland, B., Freiberg, K., & Williams, J.W. (2010). Are rates of school suspension higher in socially disadvantaged neighbourhoods? An Australian study. *Health Promotion Journal of Australia*, *21*, 12–18.
- Herrenkohl, T.I., Maguin, E., Hill, K.G., Hawkins, J.D., Abbott, R.D., & Catalano, R.F. (2000). Developmental risk factors for youth violence. *Journal of Adolescent Health*, *26*, 176–186.
- IBM Corp. (2013). *IBM SPSS Statistics for Mac, Version 23.0*. Armonk, NY. Retrieved from <http://www-01.ibm.com/software/analytics/spss>
- Jessor, R., Turbin, M.S., & Costa, F.M. (1998). Protective factors in adolescent health behavior. *Journal of Personality and Social Psychology*, *75*, 788–800.
- Jessor, R., Van Den Bos, J., Vanderryn, J., Costa, F.M., & Turbin, M.S. (1995). Protective factors in adolescent problem behavior: Moderator effects and developmental change. *Developmental Psychology*, *31*, 923–933.

- Jolliffe, D., Farrington, D.P., Hawkins, J.D., Catalano, R.F., Hill, K.G., & Kosterman, R. (2003). Predictive, concurrent, prospective and retrospective validity of self-reported delinquency. *Criminal Behaviour and Mental Health*, *13*, 179–197.
- Kang-Yi, C.D., Wolk, C.B., Locke, J., Beidas, R.S., Lareef, I., Piscicella, A.E., ... Mandell, D.S. (2018). Impact of school-based and out-of-school mental health services on reducing school absence and school suspension among children with psychiatric disorders. *Evaluation and Program Planning*, *67*, 105–112.
- Kearney, C.A., & Hendron, M. (2016). School climate and student absenteeism and internalizing and externalizing behavioral problems. *Children & Schools*. doi: 10.1093/cs/cdw009
- Kessler, R., Avenevoli, S., Costello, E.J., Georgiades, K., Green, J.G., Gruber, M.J., ... Petukhova, M. (2012). Prevalence, persistence, and socio-demographic correlates of DSM-IV disorders in the National Comorbidity Survey Replication Adolescent Supplement. *Archives of General Psychiatry*, *69*, 372–380.
- Lansford, J.E., Dodge, K.A., Pettit, G.S., & Bates, J.E. (2016). A public health perspective on school dropout and adult outcomes: A prospective study of risk and protective factors from age 5 to 27 years. *Journal of Adolescent Health*, *58*, 652–658.
- Lawrence, D., Johnson, S., Hafekost, J., Boterhoven de Haan, K., Sawyer, M.G., Ainley, J., & Zubrick, S.R. (2015). *The mental health of child and adolescents: Report on the Second Australian Child and Adolescent Survey of Mental Health and Wellbeing*. Canberra, Australia: Australian Government. Retrieved from <http://www.health.gov.au>
- Little, E. (2005). Secondary school teachers' perceptions of students' problem behaviours. *Educational Psychology*, *25*, 369–377.
- Mallett, C.A. (2016). The school-to-prison pipeline: Disproportionate impact on vulnerable children and adolescents. *Education and Urban Society*, *49*, 563–592.
- Maybery, D., Reupert, A., Goodyear, M., Ritchie, R., & Brann, P. (2009). Investigating the strengths and difficulties of children from families with a parental mental illness. *Australian e-Journal for the Advancement of Mental Health*, *8*, 1–10.
- Noltemeyer, A.L., Ward, R.M., & McLoughlin, C. (2015). Relationship between school suspension and student outcomes: A meta-analysis. *School Psychology Review*, *44*, 224–240.
- Quin, D. (2017). Longitudinal and contextual associations between teacher-student relationships and student engagement: A systematic review. *Review of Educational Research*, *87*, 345–387.
- Quin, D., & Hemphill, S.A. (2014). Students' experiences of school suspension. *Health Promotion Journal of Australia*, *25*, 52–58.
- Salle Tamika, L., George Heather, P., Betsy, M.D., Polk, T., & Evanovich, L.L. (2018). An examination of school climate, victimization, and mental health problems among middle school students self-identifying with emotional and behavioral disorders. *Behavioral Disorders*, *43*, 383–392.
- Skiba, R.J., Reynolds, C.R., Graham, S., Sheras, P., Conoley, J.C., & Garcia-Vazquez, E. (2008). Are zero tolerance policies effective in the schools? An evidentiary review and recommendations. *The American Psychologist*, *63*, 852–862.
- Steinberg, L., Lamborn, S.D., Dornbusch, S.M., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child Development*, *63*, 1266–1281.
- Sullivan, A.L., Van Norman, E.R., & Klingbeil, D.A. (2014). Exclusionary discipline of students with disabilities: Student and school characteristics predicting suspension. *Remedial and Special Education*, *35*, 199–210.
- Theriot, M.T., Craun, S.W., & Dupper, D.R. (2010). Multilevel evaluation of factors predicting school exclusion among middle and high school students. *Children and Youth Services Review*, *32*, 13–19.
- Van Bergen, P., Graham, L.J., Sweller, N., & Dodd, H.F. (2015). The psychology of containment: (Mis) representing emotional and behavioural difficulties in Australian schools. *Emotional and Behavioural Difficulties*, *20*, 64–81.
- Walker, S., & Graham, L. (2019). At risk students and teacher-student relationships: student characteristics, attitudes to school and classroom climate. *International Journal of Inclusive Education*. Advance online publication. doi: 10.1080/13603116.2019.1588925
- Wang, M.-T., & Fredricks, J.A. (2013). The reciprocal links between school engagement, youth problem behaviors, and school dropout during adolescence. *Child Development*, *85*, 1–16.
- World Health Organization. (2018). Adolescent mental health. Retrieved 18 September, 2018, from <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>