Positive associations between school suspension and student problem behaviour: Recent Australian findings

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Evidence of an association between school suspension and a range of negative behavioural outcomes has grown during the past decade. As well as contributing to academic failure and dropout, school suspension is a key element of what is known as the ‘school-to-prison pipeline’, which sees marginalised and excluded young people at an increased risk of juvenile and, eventually, adult incarceration. The results of the International Youth Development Study (IYDS), a large-scale (N=5,769) international study of adolescent development in Victoria, Australia, and Washington State, US, have shed light on how school approaches to discipline (eg school suspension) may affect the development of problem behaviours. This paper discusses the results of analyses conducted using the IYDS data, which demonstrate that school suspension increased the likelihood of Victorian and Washington State students engaging in problem behaviours—including violent and antisocial behaviour and tobacco use.

School suspension is the temporary removal of a student from school and is one of the most severe consequences Australian
schools can administer in response to student misbehaviour such as disrupting the classroom or punching another student at lunchtime. Suspension rates peak around year 9, in line with rates of student misbehaviour (Hemphill et al. 2012a, 2012b). As suspensions peak just prior to formal school-leaving age, it has been suggested that suspension is a push-out tool (Skiba 2000) to encourage students who are not doing well academically to leave school before they are of an age to do so. Whether external suspension deters or exacerbates problem behaviours such as antisocial behaviour and substance use is a matter of concern and debate. This paper summarises findings from the IYDS examining links between suspension and problem behaviour, such as violent or antisocial behaviour and tobacco use.

The school-to-prison pipeline
Concerns about the potential association between school experiences, including suspension, and later antisocial and violent behaviour resulting in incarceration have given rise to the term ‘the school-to-prison pipeline’ (Arcia 2006; Christie, Jolivette & Nelson 2005). Christie, Jolivette and Nelson (2005) proposed that a better understanding of the processes that influence this link will reduce youth violence and crime in our community and interrupt the school-to-prison trajectory of many young people.

Potential costs of suspension
The use of suspension would appear to run counter to the educational philosophy of inclusion and equity in educational opportunity, given that the students most disadvantaged by suspension are those already disadvantaged by poverty and racism (Vavrus & Cole 2002). The Education Foundation Australia reported that high school-leaving rates and inadequate educational attainment cost Australia an estimated $2.6b a year in health, social welfare, crime prevention and lower tax revenue; there are also productivity losses, as reflected in the output of goods and services (Black 2007). The potential costs of suspension, a process that can disconnect students from school, are therefore very large. Understanding how to reduce the negative effects of suspension on students will greatly benefit not only the students themselves but also their families, schools and the broader community.

School suspension: A definition
School suspension is a behaviour-management approach adopted by both primary and secondary schools. Internal suspension involves the temporary removal of a disruptive or noncompliant student from the classroom; external suspension removes the student from the physical school environment—generally in response to a breach of the school rules or code of conduct, and usually for a predetermined period of time. In this paper, suspension refers exclusively to external suspension, where a student is removed from the school environment. Although relatively little research has been conducted on the topic of internal suspension, this approach differs markedly from external suspension in that internal suspension requires the student to remain at school while suspended.
School suspension statistics

The number of external suspensions incurred by students in Australian schools is difficult to gauge. Although state governments generally mandate that schools maintain records of suspensions, these records are often restricted, rather than publicly reported, and are not generally accessible to external researchers or the general public. Much of what is known about the frequency of suspension in Australian schools therefore comes from data gathered by research conducted externally to these government bodies, such as that gathered by the IYDS (see below). IYDS data collected over a 10-year period shows almost 12 percent of year 9 students in Victorian secondary schools have been suspended from school (Hemphill et al. 2012a, 2012b). Rates vary across school-year levels, consistent with the findings of other studies reporting on suspension rates in samples of Australian adolescents (Department of Education, Training, and Employment 2012; NSW Department of Education and Communities 2013).

Results of Australian and international studies consistently show boys are suspended more often than girls (Hemphill et al. 2006, 2009, 2012a; Skiba, Michael, Nardo & Peterson 2002). These findings reflect the gender-specific nature of the rule breaches that commonly result in suspension; these most often take the form of overt, observable behaviours, such as fighting or disrupting class (Department of Education 2011; New South Wales Department of Education and Training 2008). Although state-specific student engagement policies assert that suspension should be a last-resort response to school-based problem behaviour, annual data on suspensions suggest they are often implemented in an inconsistent and, at times, ad hoc fashion (NSW Department of Education and Communities 2013). Similarly, school staff rationalise the use of suspension in different ways between schools and classrooms, providing further evidence of inconsistent practices. A number of factors, both punitive and pragmatic, underlie this practice.

Violence, antisocial behaviour and tobacco use

Understanding how school suspension is linked to later antisocial and related problem behaviours (eg violence or substance use, including tobacco use) is of the utmost importance in reducing these outcomes.

Violence

Youth violence is an issue of paramount importance in communities globally. A number of studies have shown that rates of violence increase as young people transition into adolescence (Herrenkohl et al. 2000). Enhancing our understanding of the pathways leading to youth violence is crucial to combating it, and in establishing prevention and early intervention measures.

Antisocial behaviour

Antisocial behaviour is broadly defined as behaviour which infringes upon accepted societal norms or laws, including acts of vandalism, verbal or physical assault, theft, and other behaviours detrimental to the maintenance of safety and social order (Loeber 1990). Throughout the developed world, it has consistently been shown that rates of antisocial behaviour, both violent and nonviolent, peak during mid-adolescence before declining during early adulthood (Baker 1998).
Tobacco use

Although tobacco use in Australia has declined markedly in the last decade, cigarette smoking still contributes significantly to the Australian disease burden (Begg et al. 2008). A number of national and international studies have found tobacco use most often begins in adolescence (eg Mathers et al. 2006). For this reason, tobacco use during adolescence has become an important public health concern in Australia; official estimates indicate up to 12 percent of Australians aged between 14 and 19 years smoke cigarettes (AIHW 2013).

Associations between suspension and problem behaviour

This section summarises the results of analyses conducted using data from the IYDS to examine associations between school suspension and later adolescent problem behaviours including violent and nonviolent antisocial behaviour, violence and tobacco use. It identifies school suspension as a potential risk factor in the development of these problem behaviours.

‘Risk factors’ and ‘protective factors’ are common terms used by researchers in a range of disciplines. In the context of this article, a risk factor is a factor that may increase the likelihood of a detrimental outcome or behaviour (Hawkins et al. 1992). Similarly, a protective factor is a factor that may decrease the likelihood of an adverse behaviour or outcome (Jessor, Turbin & Costa 1998).

The International Youth Development Study (IYDS)

The IYDS is a longitudinal, cross-national study that investigates the development of adolescent behaviours, including antisocial behaviour and substance use, and the influence of risk and protective factors within the adolescents’ individual, peer, family, school, and community domains on these behaviours (Hemphill et al. 2006). State-representative samples of years 5, 7 and 9 students from Victoria, Australia (n=2,884) and Washington State, United States (n=2,885) were first surveyed in 2002, with surveys readministered annually until 2004—a total sample of 5,769 students. State-representative samples were recruited in 2002 using a two-stage cluster sampling approach. In the first stage, public and private schools across both states with students in years 5, 7, and 9 were randomly selected using a probability proportionate to grade-level size sampling procedure (Kish 1965). In the second stage, a target classroom within each school was randomly selected. A more detailed description of the IYDS methodology is available in McMorris et al. (2007). Retention rates at follow-up were at least 98 percent in both states. These two geographic regions were chosen because their population, socioeconomic variables and other demographic factors are similar. School suspension rates for year 5 students were low so the results reported in this paper focus on years 7 and 9 students. Unless otherwise stated, the findings reported herein are the result of fully adjusted logistic regression analyses.

The results of the analyses of IYDS data are discussed in relation to:

- suspension and antisocial behaviour;
- suspension and violence;
- suspension and nonviolent antisocial behaviour; and
- suspension and tobacco use.
Suspension and antisocial behaviour

Given previous research describing the school-to-prison pipeline, this study sought to examine the associations between school suspension, arrest and subsequent acts of antisocial behaviour. Participants were asked how many times in the past year they had been suspended from school and arrested, and a series of questions investigating any antisocial behaviours (e.g., stealing or carrying a weapon). Data were coded according to those who had and had not engaged in antisocial behaviour (Hemphill et al. 2006). Other risk and protective factors previously found to be related to adolescent antisocial behaviour were included in the analyses; these included student factors such as prior antisocial behaviour and favourable attitudes to antisocial behaviour and drugs; family factors such as family conflict, poor family management and poor attachment to parent(s); association with antisocial peers; low school grades; and access to opportunities for prosocial activity at school and in the neighbourhood.

A number of factors were found to predict antisocial behaviour at 12-month follow-up. These included prior antisocial behaviour, spending time with antisocial peers and school suspension. After controlling for a variety of established risk and protective factors in the analyses, school suspension was associated with a 1.5 times greater risk of antisocial behaviour (see Figure 1).

**Figure 1: Links between 2002 suspension and 2003 antisocial behaviour**

- Think drugs are OK: Odds Ratio = 1.3* (CI 1.1, 1.7)
- Think drugs are easy to get: Odds Ratio = 1.3*** (CI 1.5, 1.5)
- Low grades at school: Odds Ratio = 1.3** (CI 1.1, 1.5)
- Suspended from school: Odds Ratio = 1.5* (CI 1.1, 2.1)
- Hangs around with antisocial friends: Odds Ratio = 1.8*** (CI 1.4, 2.4)
- Prior antisocial behaviour: Odds Ratio = 3.6*** (CI 2.7, 4.7)

*p<0.05; **p<0.01; ***p<0.001; pseudo R2=0.12

Note: N=3,655. Odds ratios (ORs) indicate an association between an exposure (in this case suspension) and an outcome (in this case, antisocial behaviour). 95% confidence intervals are presented in brackets. Data analyses were conducted in Stata/IC for Windows 11. Hierarchical logistic regression analyses controlled for age, gender, school clustering and school suspension in 2002. School suspension was entered first in the logistic regression analyses to determine its unique influence on antisocial behaviour independent of all the other risk and protective factors in analyses.
Suspension and violence

Having demonstrated a longitudinal association between school suspension and a general measure of antisocial behaviour, it was also important to investigate whether suspension predicted an increased likelihood that adolescents would behave violently. Guided by the findings for suspension and antisocial behaviour described above, the investigators tested the hypothesis that suspension and arrest at the first survey would predict violent behaviour 12 months later (Hemphill et al. 2009). Violent behaviour was measured by asking participants how many times in the past 12 months they had either attacked someone with the intent of seriously hurting them, or beaten someone so badly that the person required medical treatment.

The risk and protective factors selected for analysis were those previously shown to be related to adolescent violent behaviour, including:

- student impulsivity;
- emotional control;
- family conflict, attachment to mother;
- association with violent peers;
- low school grades;
- a lack of commitment to school; and
- a lack of opportunities for prosocial activity at school and in the neighbourhood.

Previous violent behaviour, higher levels of family conflict, association with violent peers and exposure to community norms favourable to drug use were associated with an increased risk of violent behaviour one year later. The results also showed that both school suspension and arrest increased the odds of violent behaviour at least 1.5 times after taking into account other established risk factors (see Figure 2).
Figure 2: Links between 2002 suspension and 2003 violence

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict at home</td>
<td>1.2* (1.01, 1.43)</td>
</tr>
<tr>
<td>Hangs around with violent friends</td>
<td>1.2* (1.02, 1.40)</td>
</tr>
<tr>
<td>Community accepts drug use by young people</td>
<td>1.29** (1.08, 1.54)</td>
</tr>
<tr>
<td>Community not organised</td>
<td>1.29* (1.03, 1.61)</td>
</tr>
<tr>
<td>Suspended from school</td>
<td>1.66** (1.19, 2.33)</td>
</tr>
<tr>
<td>Prior police arrest</td>
<td>1.81* (1.05, 3.13)</td>
</tr>
<tr>
<td>Prior violent behaviour</td>
<td>4.83*** (3.43, 6.82)</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

Note: N=3,818. Odds ratios (ORs) indicate an association between an exposure (in this case suspension), and an outcome (in this case, violence). 95% confidence intervals presented in brackets. Multiple imputation using SAS (Version 9.1, SAS Institute Inc, Cary, NC, USA.) was performed to reduce the possibility of biased estimates. Logistic GEE regression models were used to examine the prediction of violence in 2003, accounting for the clustering of students within schools.

Suspension and nonviolent antisocial behaviour

The authors’ previous research has demonstrated independent associations between suspensions and problem behaviours in students, even after taking into account previous problem behaviour. This study next sought to address how suspension impacts on student behaviour. Three hypotheses were tested using path analyses.

- Being suspended from school may negatively affect student learning and, when student learning is affected, students may respond by engaging in problem behaviours.
- School suspension potentially leaves vulnerable young people, whose parents may be working, unsupervised while they are not at school. This could give them the opportunity to engage in antisocial behaviour with other students who are not at school, hence increasing the problem behaviour of the suspended student.
- For those students already uninterested in attending school, suspension could be a reward; it could be seen as a holiday and encourage them to view antisocial behaviour favourably.

Although there is a vast body of literature focused on violent antisocial behaviour, far less has been written concerning nonviolent antisocial behaviour like theft and substance use at school. This is despite the fact that these kinds of antisocial behaviour are far more common than violent antisocial behaviour. Associations between school suspension and nonviolent antisocial behaviour were examined in two different analyses of IYDS data (Hemphill et al. 2012b, 2013) relating to year 7.
students from Victoria and Washington State (3 consecutive waves of data were collected for this age group). Study participants were asked whether they had been involved in any of a range of nonviolent antisocial behaviours (e.g., stealing, selling drugs or being drunk at school).

In both states, school suspension in year 7 was associated with higher rates of nonviolent antisocial behaviour and suspension in year 9, before controlling for year 8 factors. Factors related to the first and second hypotheses that may explain how suspension impacts on behaviour were low grades and association with antisocial peers in year 8 and, in Washington State only, antisocial behaviour in year 8 (Hemphill et al. 2012b). No support was found for the third hypothesis (that suspension would be linked to favourable attitudes to antisocial behaviour).

The second analysis examining the association between school suspension and nonviolent antisocial behaviour found that suspension was not associated with nonviolent antisocial behaviour, after including other established risk factors such as prior nonviolent antisocial behaviour, alcohol and other substance use, family conflict, poor family management, affiliation with antisocial friends, low commitment to school, and opportunities for prosocial involvement at school (Hemphill et al. 2013) in the analysis. Notably, there was no association between suspension and nonviolent antisocial behaviour after the variable of interaction with antisocial friends was added into the statistical model.

**Suspension and tobacco use**

To develop a clearer understanding of the factors underlying the associations between school suspension and substance use, the next analyses examined links between school suspension and tobacco use (Hemphill et al. 2012a). Data from students in years 7 and 9 in Victoria and Washington State were analysed. Tobacco use was measured by asking survey respondents to indicate how often they used tobacco within the past 30 days. Rating options ranged from not at all to 40 or more times per month. Participants were classified as either smokers or nonsmokers according to their responses. As in previous analyses, other risk and protective factors for tobacco use were controlled. These factors included participants’ favourable attitudes to drug use, prior antisocial behaviour, family conflict, poor family management, affiliation with antisocial peers, friends’ use of drugs, low school grades, low commitment to school, and availability of drugs in the community.
Figure 3: Links between 2002 suspension and 2003 tobacco use

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Odds Ratio (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norms favourable to drug use</td>
<td>0.49* (.26, .93)</td>
</tr>
<tr>
<td>Friends' use of drugs</td>
<td>1.84*** (1.43, 2.37)</td>
</tr>
<tr>
<td>Current alcohol use</td>
<td>1.91** (1.21, 3.03)</td>
</tr>
<tr>
<td>Suspended from school</td>
<td>2.08** (1.23, 3.52)</td>
</tr>
<tr>
<td>Current tobacco use</td>
<td>5.87*** (3.32, 10.38)</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001; pseudo R²=0.29

Note: N=3,467. Odds ratios (ORs) indicate an association between an exposure (in this case suspension), and an outcome (in this case, tobacco use). 95% confidence intervals presented in brackets. Data analyses were conducted in Stata/IC for Windows 11. Hierarchical logistic regression analyses controlled for age, gender, school clustering, and 2002 current tobacco use.

The results showed that being suspended from school in year 7 was a predictor of tobacco use 12 months later, almost doubling the likelihood of this behaviour (see Figure 3). Notably, suspension predicted tobacco use more strongly than did friends’ use of drugs and alcohol, or exposure to community norms favourable to drug use. For year 9 students, academic failure and cannabis use were the strongest predictors of future tobacco use; school suspension did not predict tobacco use at this age. Suspension’s lack of effect is consistent with studies reporting that tobacco usage patterns are commonly established by year 9 (Mathers et al. 2006).

Discussion

The findings of this series of analyses clearly show a relationship between external school suspension and a range of behaviours detrimental to the health and wellbeing of young people. In these particular instances, the links between suspension and these problem behaviours was observed even when other known risk factors were taken into account. Although the reasons for this are not entirely clear, there are a number of possible explanations. Significant time spent unsupervised outside the school environment may allow young people greater opportunity to associate with antisocial peers. Furthermore, suspended students may develop an ‘outsider’ mentality, internalising their identity.
as a disruptive or ‘bad’ student, and become alienated or detached from the school community. A growing body of research also suggests suspension is largely ineffective as a deterrent against further problem behaviours (American Academy of Pediatrics Council on School Health 2013; American Psychological Association Zero Tolerance Task Force 2008; Casella 2003; Costenbader & Markson 1998; Skiba & Rausch 2006). This research, and the evidence presented above, suggest that not only does suspension fail to reduce problem behaviour, in many cases it may contribute to adolescents’ future engagement in antisocial and problem behaviours.

Internal suspension has been suggested as an alternative to external suspension. However, few studies have examined whether internal suspension, by comparison with external suspension, reduces antisocial and problem behaviour by adolescents. Like internal suspension, external suspension removes the student from the classroom and limits their contact with peers. Unlike external suspension, internal suspension requires the student to attend school and ensures they are supervised within the school environment. This approach to behaviour management requires a supervising teacher and an allocated space for the student, so students do not perceive the suspension as a holiday and are still required to complete schoolwork. However, findings on the associations between internal suspension and student outcomes are inconsistent (Mendez & Sanders, 1981; Stage, 1997), and additional investigation is required.

Teachers need improved pre-service teacher training in managing student misbehaviour, and ongoing professional development opportunities, to keep abreast of behaviour management techniques. These include identifying why students misbehave and addressing this in a more effective way, including problems within the classroom and school environment.

Within the school itself, the quality of teacher-student relationships, classroom management approaches and curriculum enhancement should be considered. Approaches to behaviour management are of utmost importance. Schools should consider moving from the reactive approach (of dealing with situations when they arise) to a proactive approach aimed at preventing and/or limiting misbehaviour. Prevention is crucial to this form of behaviour management, and involves teaching students how to interact in prosocial ways and increase their conflict resolution skills. School-wide positive behavioural support is an approach that incorporates prevention, multi-tiered support through a continuum of interventions and re-education for students who misbehave, and data-based decision-making (Alberto & Troutman 2009; Horner & Sugai 2004; Skiba & Sprague 2008). This approach is being implemented in Australian schools, particularly in Victoria and Queensland. Where the safety of fellow students and staff is compromised, however, external suspension may be necessary despite the growing number of detrimental behaviours and outcomes associated with this practice.

Conclusions

Maintaining an environment that is conducive to learning and safe for both staff and students is an ongoing challenge for Australian schools. At times, school staff may suspend students from school to ensure a safe learning environment. However, even though excluding students from school provides staff with a short-term solution to managing student misbehaviour, the long-term costs to the community of excluding some students from school are potentially very high. This is especially likely
to be so if suspended students become alienated from school (given school attendance is a potential protective factor) and engage in criminal behaviours that are likely to become an entrenched lifestyle. It is therefore crucial for researchers to help schools find effective ways to provide a safe learning environment for all, that also allows students who misbehave to continue their education and training rather than being swept along in the school-to-prison pipeline.

Although school suspension is commonly used in Australian schools, it is time to rethink its use as the preferred strategy for managing student misbehaviour. There is now sufficient evidence to suggest that school suspension is not an effective approach to reducing student misbehaviour, consistent with many studies that show punishment does not work (Sanson et al. 1996). If school is to be an environment in which students can engage in a range of learning activities, students must be given the opportunity to learn from the mistakes they make in the course of their educational journey. Recognising that schools may be an important protective factor in the lives of students who engage in problem behaviour, schools must review their approaches and adopt strategies that maximise outcomes for all students.

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