

A review of school drug policies and their impact on youth substance use

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SUMMARY

Youth substance use is an important social and health problem in the United States, Australia and other Western nations. Schools are recognized as important sites for prevention efforts and school substance use policies are a key component of health promotion in schools. The first part of this paper reviews the known status of school policies on tobacco, alcohol and other illicit drugs in a number of Western countries and the existing evidence for the effectiveness of school drug policy in preventing drug use. The review shows that most schools in developed countries have substance use policies but that there is substantial variation in the comprehensiveness of these policies (i.e. the breadth of people, places and times of day

that are explicitly subject to policy prohibitions), and the orientation of their enforcement (e.g. punitive versus remedial), both across and within schools. The few studies of policy impact focus solely on tobacco policy and provide preliminary evidence that more comprehensive and strictly enforced school policies are associated with less smoking. The second part of the paper introduces the International Youth Development Study, a new longitudinal research project aimed at comparing school policies and the developmental course of youth drug use in the United States, where drug policies are abstinence-based, with Australia, which has adopted a harm minimization approach to drug policy.

Key words: adolescent substance use; school drug policy

INTRODUCTION

Youth substance use and the resulting damage are recognized as significant global public health issues in society today [World Health Organization (WHO), 1997; WHO, 1999; WHO, 2001]. Adolescent use of tobacco, alcohol and other drugs has risen over the last decade (Bauman and Phongsavan, 1999), in spite of increased expenditure on a variety of prevention

initiatives. If the current trend in youth tobacco use continues, 250 million children alive today will die from tobacco-related causes (WHO, 2001). Initiation of alcohol and other drug use in childhood and adolescence predicts misuse later in life (Rachal *et al.*, 1982; Robins and Przybeck, 1985; Hawkins *et al.*, 1997), and adolescent substance use is associated with a range of immediate physical and social harms, including accidents, disrupted family and peer relationships, educational problems and overdose (WHO, 1997; WHO, 1999).

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SCHOOL-BASED HEALTH PROMOTION

Historically, school-based substance use prevention has been synonymous with curricula aimed at affecting student knowledge, attitudes and behavior. With growing appreciation for the impact of parents, peers and communities on adolescent substance use, schools are now being recognized as more than 'sites' for the delivery of such programs, but also as important social environments (Flay, 2000). Schools provide students with behavioral models, opportunities to bond with people who have differing expectations about substance use, and access to substances (Durlak, 1997; Baum, 1998; Hawkins *et al.*, 1998; Bond *et al.*, 2001; Catford, 2001; Commonwealth Department of Health and Family Services, 2001; Butler *et al.*, 2002; Hallfors and Van Dorn, 2002). 'Health promoting schools', a framework endorsed by the WHO (WHO, 1996) and now supported widely in Europe and Australia, reflects beliefs that schools should promote healthy development among youth as actively as they promote learning and that schools are uniquely suited to affect a broad range of developmental outcomes. Health-promoting schools adopt many strategies to strengthen their capacity as healthy settings, including the institution of curricula, teaching practices and policies that enhance youths' physical, mental and social well-being.

Both drug education curricula and school policies are considered important components of school-wide health promotion; however, the development, implementation and evaluation of school drug policies have received much less empirical attention than drug education curricula and programs (White and Pitts, 1998; Flay, 2000). Policies influence the social environment of the school by playing a crucial role in setting behavioral norms and establishing guidelines for student behavior control (Goodstadt, 1989). This paper reviews the literature on school substance use policies and relations between school policies and adolescent substance use, which is dominated largely by research on tobacco policy and use. The paper then introduces a new longitudinal study that will add key information to the field.

SCHOOL POLICIES FOR TOBACCO, ALCOHOL AND OTHER DRUGS

National studies of school tobacco policies in many developed countries show that the majority

of schools have adopted written smoking policies in some form. In the United States, two related studies of schools showed that >97% of schools had written policies prohibiting tobacco use (Ross *et al.*, 1995; Crossett *et al.*, 1999; Small *et al.*, 2001); in Australia, 97% of secondary schools prohibited smoking for all students on all occasions (Clarke *et al.*, 1994); in England and Wales, 88% of middle and secondary schools had an official policy on student smoking (Myers, 1989); and in New Zealand, 97% of primary and intermediate schools had written policies on smoking (Reeder and Glasgow, 2000).

Despite the high prevalence of some form of tobacco policy in schools, there appears to be variation in the degree of restrictions imposed. About two-thirds of elementary, middle/junior high and senior high schools in the United States had policies prohibiting tobacco use for students, staff and visitors in the school building, on school grounds and at all school-sponsored events (Small *et al.*, 2001)—the national criteria for establishing smoke-free environments (Centers for Disease Control and Prevention, 2001). Similarly, while 97% of primary and intermediate school principals in New Zealand reported that their schools had written policies for smoking and 82% of those claimed that the policies established smoke-free buildings, only 44% said that both the building and grounds were smoke-free (Reeder and Glasgow, 2000).

School tobacco policies for younger students appear to be less frequently documented than policies for older students. Middle schools in England and Wales were less likely than secondary schools to have official policies on pupils' smoking (65% versus 96%) (Myers, 1989), and in Nottinghamshire (UK), more secondary than primary schools had written policies addressing student smoking on the school site (Denman *et al.*, 1999). There is also evidence that, where they exist, tobacco policies in schools for younger students are more comprehensive (in terms of the breadth of people, places and times of day that are explicitly subject to policy prohibitions) than are policies in schools for older students. Bowen and colleagues (Bowen *et al.*, 1995) found that all US elementary schools and 98% of middle schools banned smoking on school grounds, while 12% of high schools permitted smoking outside on school grounds or in a designated smoking area inside the school. In England and Wales, more public secondary schools compared with middle schools permitted teachers to smoke on school grounds, and a small

proportion of the secondary schools permitted older students to smoke in designated areas (Myers, 1989). Similarly, primary schools in Nottinghamshire were more likely than secondaries to prohibit staff smoking on school sites, while secondary schools tended to have policies that restricted staff smoking to particular areas (Denman *et al.*, 1999).

The documentation of school policies relating to the use of alcohol and other drugs is far less prevalent than that for tobacco use. It appears, in the United States at least, that the majority of schools have written policies prohibiting alcohol and other drug use (Ross *et al.*, 1995; Crossett *et al.*, 1999; Small *et al.*, 2001). In addition, over two-thirds of US schools defined a drug-free school zone around school grounds (Ross *et al.*, 1995).

CONSEQUENCES FOR SCHOOL POLICY VIOLATIONS

The procedures that are followed when policy restrictions have been violated are a central component of school drug policies. For all types of first-time substance use violations, the most common consequences among US schools are notification of school administrators and notification of the student's parents or guardians (Ross *et al.*, 1995; Small *et al.*, 2001). Similarly, the most common consequence for a first-time tobacco violation in Australian secondary schools is contacting the student's parents or guardians (Clarke *et al.*, 1994). For AOD (alcohol and other drug) violations in US schools, referral to a school counsellor, suspension from school and encouragement to participate in a student assistance program are frequent responses, and for illegal drug use violations, referral to the legal authorities is a typical consequence (in 75% of schools) (Small *et al.*, 2001). It appears that, compared with AOD use, tobacco use is thought to be a less severe violation and less warranting of remediation in US schools. Students are typically required to participate in an assistance program for alcohol violations in 39.5% of schools and for illegal drug violations in 44.8% of schools, but for cigarette smoking violations they are typically required to participate in assistance programs in only 18.2% of schools (Small *et al.*, 2001).

The type of consequences provided for school drug policy violations may also reflect developmental considerations by those who enforce substance use policies, with more severe

consequences provided for violations by younger students. For example, more middle/junior high than senior high schools in the United States responded to tobacco use violations with out-of-school suspension (38.8% versus 24.3%), whereas more senior high schools responded with in-school suspension or detention (48.0% versus 40.5%) (Ross *et al.*, 1995). It also appears that, in addition to being stricter with younger students, those who enforce policies tend to believe that younger students would benefit more from remediation than older students. More middle/junior high schools than senior high schools gave referrals to an assistance program for tobacco use (16.4% versus 7.1%) and required participation in an education or counseling program for tobacco use (13.9% versus 8.3%) and AOD possession (50.1% versus 42.9%) (Ross *et al.*, 1995).

Although there appear to be differences between the consequences for school drug policy violations in US schools teaching different student age ranges, the overall picture in US schools is towards punishment rather than remediation: the proportion of schools referring students to education or counseling programs is relatively small. A state-wide study of Florida schools showed variation between middle and high schools in the specific strategies used to enforce anti-tobacco policies, comparable to the Ross study discussed previously, but overall, enforcement strategies were more likely to be punitive than non-punitive (Tubman and Vento, 2001). A number of other studies have shown that, in general, US schools are more likely to use exclusively punitive consequences in response to tobacco policy violations rather than exclusively remedial consequences, or a combination of the two (Crossett *et al.*, 1999; Tompkins *et al.*, 1999).

POLICY IMPACT ON STUDENT BEHAVIOR: WHAT CONSTITUTES EFFECTIVE TOBACCO POLICY?

The studies discussed so far did not examine relations between school policy and student behavior, and therefore did not provide information about what comprises effective policy and enforcement. As early as 1989, public health experts recognized the lack of empirical evidence regarding the impact of school policies and called for further systematic research (Goodstadt, 1989). Over a decade later, the dearth of study persists (Willemsen and De Zwart, 1999; Flay, 2000) and

the few studies that evaluated effects of school policy focused solely on tobacco policy. These studies, reviewed below, investigated relations between student tobacco use and policy status (i.e. the existence and formalization of tobacco policy), comprehensiveness (i.e. the breadth of people, places and times of day that are explicitly subject to policy prohibitions), and implementation or enforcement.

Samples of schools that contain substantial variation in the existence of student tobacco policies are rare because such policies are highly prevalent (Ross *et al.*, 1995; Small *et al.*, 2001), and the few studies that have investigated policy status effects without considering additional factors show mixed results. An early study comparing the prevalence of smoking among recent former students of two public British boarding schools showed that students who attended the school with the more permissive policy reported higher rates of smoking than those who attended the school with a strict anti-smoking policy (Porter, 1982). A representative regional follow-up study of fifth-grade students in Swedish schools showed that school adoption of a formal anti-smoking policy (as reported by principals) was unrelated to student smoking in sixth grade among those who had never smoked by fifth grade (Rosendahl *et al.*, 2002). A representative national study of 15-year-old pupils in Scottish schools evaluated the relative impact of tobacco policy status on student perceptions of both student and teacher compliance with tobacco policy (Griesbach *et al.*, 2002). The study found no association between policy status and students' perceptions of smoking in the bathrooms; however, in schools with written student tobacco policies, fewer pupils reported seeing pupils smoke outdoors compared with schools that had informal or uncertain policy status. There was no association between policy status and pupils' reports of teachers smoking outdoors. An Australian study found that the prevalence of student smoking was unrelated to the status of student, staff or visitor smoking policies (Clarke *et al.*, 1994). These studies suggest that simply having a formal school tobacco policy may not affect general smoking, but rather may only affect smoking behavior that would comprise flagrant policy violations. Despite the unclear relation between formal tobacco policies and student smoking, the importance of formal policies in setting a non-smoking norm within the school has been

stressed (Reid *et al.*, 1995; Reeder and Glasgow, 2000).

Studies that consider factors in addition to policy status may help determine what distinguishes effective and ineffective policy, as well as what policies can and cannot do. A national study of secondary school students in Wales found that more comprehensive smoking policies (those covering a broader range of people, places and times of day) as reported by teachers, were significantly related to less self-reported daily smoking among students, even after accounting for individual risks such as parent and peer smoking (Moore *et al.*, 2001). Comprehensiveness was not significantly related to smoking at least weekly, suggesting that even comprehensive school policies might affect smoking during weekends less than smoking during the week. A survey of 16- to 19-year-old students in schools and colleges in England and Wales found a similar negative association between policy comprehensiveness (i.e. the presence of a staff smoking policy in addition to a student smoking policy) and the prevalence of current smoking (less-than-weekly and regular smoking) among students in colleges, but not among students in schools (Charlton and While, 1994). Students tended to smoke more cigarettes per day, on average, in institutions where students said that smoking was allowed than in institutions where students said that smoking was not allowed (Charlton and While, 1994). However, in schools where smoking was prohibited, students tended to smoke more cigarettes per day outside of school relative to inside school than in schools where smoking was permitted (Charlton and While, 1994).

A study of nearly 5000 seventh graders in three California school districts defined schools with comprehensive school tobacco policies as those with all of the following four components: (i) student smoking not permitted on school grounds; (ii) student smoking restricted near school grounds; (iii) students not permitted to leave school grounds during the day; and (iv) the development of a smoking prevention education plan. The study showed that schools with such comprehensive school tobacco policies had lower prevalence rates of student-reported smoking and lower mean amounts of smoking per smoker compared with schools with three or less of the above components (Pentz *et al.*, 1989). After accounting for student socio-economic status, school environmental support, staff awareness and

staff perceptions of school policy effectiveness, the significant relationship between policy comprehensiveness and amount of smoking was retained, although an association with smoking prevalence was not. Finally, a study of secondary school students in Australia showed that having a staff smoking policy or a visitor smoking policy in addition to having a student smoking policy was unrelated to prevalence rates of student-reported smoking in the past week (Clarke *et al.*, 1994). These studies generally suggest that comprehensive policies may result in students smoking fewer cigarettes, but they do not necessarily prevent students from smoking at all. Indeed, policy comprehensiveness may affect where some students smoke rather than whether or not they smoke during the school day. A year after implementing a state-wide ban on smoking on school property, school administrators reported that students had switched from smoking in a designated area on school property to smoking in a public area off school property (Northrup *et al.*, 1998).

Studies that investigated associations between policy enforcement and student tobacco use suggest that enforcement plays a meaningful role in policy effectiveness. A representative national survey of grade 9–12 students in US schools asked students about their smoking history, intentions to smoke and their school's smoking policy (Wakefield *et al.*, 2000). Results showed that school smoking bans were associated with higher proportions of students in the earlier stages of smoking uptake (e.g. being a non-smoker versus being an early experimenter), but only when enforcement of the ban was strong, as indicated by perceived student compliance with the ban. The study of secondary school students in Wales showed that stricter policy enforcement was related to lower rates of both daily and weekly smoking, independent of policy comprehensiveness (Moore *et al.*, 2001). The national study of 15-year-olds in Scottish schools showed that, compared with restrictions on pupil smoking that were not always enforced, restrictions that were always enforced predicted more student perceptions of students 'never' smoking in restrooms, cloakrooms and outside areas, and fewer student perceptions of students smoking in these places 'about every day' (Griesbach *et al.*, 2002). The only study of the association between the orientation of policy enforcement and student tobacco use showed that having policies with a high emphasis on

prevention and having policies with a low emphasis on cessation (versus a low emphasis on prevention and a high emphasis on cessation) were associated independently with a lower smoking prevalence and less smoking among Californian seventh graders (Pentz *et al.*, 1989).

REVIEW SUMMARY

The literature on school substance use policies and their impact is small, particularly in relation to AOD policy. However, the studies reviewed provide some insight into the ways that policies do and do not appear to affect behavior, and they constitute important initial steps toward understanding what contributes to policy effectiveness. To summarize, although the majority of schools in developed countries appear to have some substance use policies, there is a great degree of variation in the comprehensiveness, enforcement and orientation of these policies, both across and within schools. The tendency of schools that serve younger students to have fewer formal policies may reflect perceptions that younger students are less likely to use licit and illicit drugs than are older students and that, therefore, formal policies are considered less of a priority. However, when policies do exist for younger students, they appear to be more comprehensive compared with policies in schools for older students. This may similarly reflect beliefs that younger students derive more benefit than older students from being sheltered from negative environmental influences. Lastly, administrators of schools for younger students without formal policies may believe that formal, comprehensive policies are unnecessary because their schools tend to be smaller and easier to manage with informal policy structures.

The finding that schools appear to treat tobacco policy violations as less severe and less worthy of remediation than AOD violations suggests that tobacco violations are seen as relatively less health-compromising. Given the health consequences of tobacco use, this is disturbing. About 30% of adolescents first experiment with smoking at 11–12 years of age, and ~70% do so between the ages of 13 and 17 years (Gilpin *et al.*, 1999). The few studies of policy impact suggest that more comprehensive and better-enforced school policies are associated with less smoking among secondary

school students. Therefore, many schools seem to be providing less effective policies to the age groups who are most at risk for smoking initiation. The studies reviewed also suggest that when school policies have an impact, they tend to affect a circumscribed set of substance using behaviors. Specifically, they appear to decrease overt but not covert policy violations, and they appear to decrease smoking frequency (e.g. smoking during the school week), but not smoking prevalence.

There is much more to learn about what comprises effective school policies to limit students' substance use. Very little is known about school AOD policy, and there are no studies associating AOD policy and AOD use. Even in the area of tobacco policy, where more research has been conducted, no single study has investigated all aspects of school policy, such as how schools develop, document and communicate their policies, and the scope and orientation of the restrictions. With the exception of one follow-up study (Rosendahl *et al.*, 2002), the existing studies of tobacco policy impact used only cross-sectional data to investigate the main effects of one or two policy components on youth tobacco use. To understand better what contributes to effective school policy, research using longitudinal data to investigate simultaneously effects of multiple substance-specific policy components on a variety of student substance use outcomes is needed.

THE INTERNATIONAL YOUTH DEVELOPMENT STUDY

The International Youth Development Study (IYDS) is a new collaborative, longitudinal research project being conducted in Victoria, Australia, and Washington State in the United States. The study is designed to investigate many aspects of adolescent development within each state's policy context, with a particular emphasis on the development of substance use problems and school drug policies. Victoria and Washington are similar in many ways, yet the differences between them provide a meaningful backdrop for studying the development of substance use problems. In both states, specific elements of school drug policies are decided by the individual schools themselves, but many national-, state- and district-level policies mandate specific school policies or provide

guidelines for them (Small *et al.*, 2001). As a consequence, school drug policies in both states reflect the context of the national and state approaches towards adolescent drug use, which are rather divergent (Roche *et al.*, 1997).

The overarching goal of US federal drug policy is a reduction in the prevalence or amount of drug use (Caulkins and Reuter, 1997), manifested at the school level by policies that are exclusively abstinence-based and reflect zero tolerance for substance use. Zero tolerance for substance-use violations suggests that students found to possess, use or sell tobacco, alcohol or drugs are subject to harsh penalties, namely suspension or expulsion and possibly referral to law enforcement agencies (Brown, 2001). In contrast, the Australian federal government has adopted overtly a harm minimization approach towards drugs in its National Drug Strategy (Ministerial Council on Drug Strategy, 1998). Australia's National School Drug Education Strategy includes abstinence as only one component within the broader policy goal of harm minimization, explicitly channelling efforts toward prevention, referral and intervention. The strategy encourages the provision of student welfare services in schools and stresses the importance of the retention of students in schools, highlighting the fact that detachment from school is a risk factor for further involvement in drug use [Department of Education Training and Youth Affairs (DETYA), 2000].

As is clear from the review in the first section of this paper, there is currently little empirical evidence regarding the effectiveness of either one of the abstinence-only or harm minimization orientations. Some studies show that most schools in the United States have written drug policies congruent with zero tolerance approaches (Martin *et al.*, 1999; Small *et al.*, 2001). However, there is also some suggestion that school administrators, teachers and counsellors face many dilemmas in implementing such policies (Pentz *et al.*, 1997). Suspending and expelling students who transgress, whilst maintaining an orderly school environment, is not likely to prevent these students' further drug involvement, potentially adding lack of involvement in school and school failure to the list of risk factors experienced by these students, who are already at high risk of drug abuse (Hallfors and Van Dorn, 2002). Even less is known about the prevalence and composition of school drug policies in Australian schools.

The IYDS will provide the first comprehensive description of school drug policies in a representative sample of schools in an Australian and an American state. The IYDS sample is comprised of representative state samples of almost 6000 fifth-, seventh- and ninth-grade students from >300 schools. Measures of the school policy environment obtained via a School Administrator Survey and a brief telephone interview with parents will be linked with various student substance-using behaviors, attitudes towards substance use, availability of substance use, and other risk and protective factors obtained in student surveys. Subsequent annual waves of student data collection will be used to develop and test a longitudinal model of policy impact on student behavior.

CONCLUSIONS

This paper has reviewed the available research on the prevention of youth substance use through the use of school policy. The studies reviewed are limited mostly to cross-sectional investigations, but provide some evidence that well implemented school policies are an important component of school-based health promotion. Research that clarifies the distinction between policy orientation towards harm minimization versus abstinence is greatly needed, as is research on the impact of this distinction on adolescent substance use and related harms. Longitudinal evidence suggests that young people excluded from school can suffer negative consequences and increases in drug-related problems (Nutbeam *et al.*, 1993). Given the potential for drug policy to do harm instead of good (Martin *et al.*, 1999), longitudinal research is vital to clarify further the impact of school policy on youth behavior. The IYDS is currently being initiated in Australia and the United States in an effort to study these issues.

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