Youth Substance Use Prevention: Programs, Approaches, and Best Practices

Literature review prepared for Health Canada
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Purpose

This report provides a comprehensive review of the relevant literature on youth substance use prevention published within the last ten years. Articles included in this review were published between the years 2000 and 2011 and originate from peer-reviewed journals. Exceptions were made to include older articles if they were highly influential or related to the DARE program.

Method

Articles were retrieved from PsycINFO. A broad search for the keywords, “drug,” “prevention,” and “youth” retrieved 1,367 articles. Many of these publications were not directly related to the purpose of this review, for example articles that focused on drug treatment, outcomes of drug abuse, effects of prenatal or perinatal drug exposure, or safe injection/HIV prevention and hence they were excluded. Articles regarding prevention efforts that solely targeted smoking or alcohol use were also excluded, as the primary aim of this report was to inform reviewers of “illicit” drug usage among adolescents (e.g., marijuana, cocaine, ecstasy). These exclusion criteria resulted in a final list of 264 core articles. 14 additional articles were included from other sources, for a total of 278 articles that have been organized into four general sections. Articles are listed alphabetically by author, with the exception of some articles that are grouped by topic within a section (e.g., DARE). A fifth section on measures for use in research and evaluation in the area of youth substance use is included. In addition, at the end of this document, there is a list of 7 other resources/articles that may be of interest.

Organization

Part I: Current Perspectives on Substance Use Prevention
Part II: Models of Substance Use Prevention Programs
Part III: Risk and Protective Factors Influencing Youth Substance Use
Part IV: Research and Evaluation Methods
Part V: Measures for Use in Research and Evaluation
Summary of findings

- Youth engage in substance use for a number of reasons, including boredom, psychological distress, and normative influence of parents and peers.

- Major factors predicting drug abuse include youths’ attitudes and beliefs about drugs, psychological well-being, family history, school culture, wealth/access to drugs, and peer influence. However there is no clear picture; effects of one factor are often mediated by another (i.e., whether or not one factor predicts engagement in substance use depends on the level of a second factor).

- Family attachment, healthy peer relationships, school involvement, and self-esteem are all important protective factors against substance use. Such factors can inform the foundation for strengths-based programs which have been found to be effective in helping youth develop positively (and avoid substance use).

- Although the most widely implemented drug prevention program in North America, DARE has not been found to reduce substance use or abuse among adolescents.

- Programs that have proven most effective are those that are well-designed, multi-component, incorporate an understanding of the etiology of substance use, nonjudgmental, developmentally and population appropriate and are of high intensity. Approaches that encourage adolescents to make their own decisions about drugs (informed choice) and those that target perceptions of social norms (social influence) are favoured in the literature.

- There exist conflicting findings in the literature regarding best practices for preventing substance use among adolescents. Researchers are continuously working to refine measures and develop strategies to best evaluate the effectiveness of prevention efforts.
Part I of this document reviews the literature on successful and unsuccessful approaches to substance use prevention, as well as effective practices for school-based programs. This section also reviews strategies for involving parents and community-members in prevention efforts, and implications of drug use policies, both at national and local levels.

**Key terms**

**Abstinence-based:** Abstinence-based strategies advocate abstaining from using drugs altogether. This can be considered a primary prevention approach (i.e., preventing the onset of substance use). One common strategy is the “Just say no” approach.

**Informed choice:** Informed choice approaches encourage adolescents to make their own decisions about substance use based on information provided (and generated through discussion) on risks and preferred alternatives. This can be considered a primary prevention approach for youth who have not started using substance OR a secondary approach for those youth who have started using substances (i.e., with the aim of reducing use).

**Social influence:** Social influence approaches primarily incorporate discussion about peer influence, and offer youth strategies to resist peer pressure to use substances. (Note that in the substance use prevention literature, peers are generally the focus of “social influence” models).

**Strengths-based:** Strengths-based approaches build on adolescents’ strengths (i.e., “assets”) rather than target reducing their “risk-factors.” The thought is that by enhancing strengths, risk factors will be outweighed by protective factors.

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Figure 1: Common substance use prevention approaches.
*Number of articles in each category.
Part II provides a compendium of youth substance use prevention programs evaluated within the past ten years. Programs vary by approach (e.g., informed choice, abstinence-based, social influence), location (e.g., school, home, community), and method of delivery (e.g., peers, mentors, media). All programs are universal (i.e., designed for all youth) except for those in the “targeted” section which are broken down by target population (e.g., youth who identify as GLBTQ, Aboriginal, or who are considered “high-risk”).

**Figure 2: Organization of substance use prevention models.**

<table>
<thead>
<tr>
<th>What works</th>
<th>What doesn’t</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Multi-component strategies (individual, school, family, community, media)</td>
<td>• Single-dose interventions; narrow focus (e.g., only teach affective education)</td>
</tr>
<tr>
<td>• Interactive formats (peer involvement, discussion-based)</td>
<td>• Non-interactive formats (lecturing about facts)</td>
</tr>
<tr>
<td>• Non-judgemental approaches that focus on multiple factors that lead to substance use</td>
<td>• Abstinence-based approaches</td>
</tr>
<tr>
<td>• Serious, straightforward information</td>
<td>• Trying to sound cool; providing information that is below youths’ developmental level</td>
</tr>
<tr>
<td>• Programs that are well-implemented, sequential, high intensity, foster competence, developmentally appropriate</td>
<td>• Poorly implemented programs that are developmentally mis-matched, poorly designed, and have limited intensity</td>
</tr>
</tbody>
</table>
Part III identifies risk and protective factors that have been found to influence adolescents’ decisions to use or not use substances. Factors have been divided into three broad categories often used in the resiliency literature: individual-level, family, or contextual (e.g., community, school). Although factors have been categorized for ease of reference, it is important to understand that these factors are all related and influence each other. For example, an individual-level factor such as attitude towards substance use is impacted by experiences in the home, school, and wider community. Strengths-based programs understand that by building up protective factors, risk factors can become less of an influence in the life of a youth. For example, mentoring programs seek to build relationships, and having at least one solid relationship with an important adult is the number one protective factor shared by resilient individuals. Thus, even if a program does not focus on substance use prevention in its’ content, it can prevent substance use by virtue of the strengths focus that promotes positive youth development.
The final section of this document highlights issues that have been raised with current methods of substance use prevention research. Common concerns include a lack of consistent evaluation standards and biased reporting from youth and external evaluators. This section also reviews articles that suggest strategies for evaluating programs and concludes with a listing of measures that have demonstrated good psychometric properties.

**Common concerns**

- Lack of consistent evaluation standards
- Poorly implemented programs (implementation is not taken into account)
- Lack of overall perspective in reporting (i.e., failing to consider etiology and comorbidity of issues)
- Questionable reliability and bias in adolescent self-reports
- Manipulation of analyses by researchers to report favourable results

**Best practices**

- Mixed method research (qualitative and quantitative)
- Utilization of psychometrically sound measures
- Building trust with adolescents prior to conducting research
- Multi-site evaluations
- Group evaluations (e.g., focus groups, group interviewing)
- Greater transparency and accountability in published research

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**Figure 4: Organization of evaluation methods literature.**

- **Current issues in prevention research**
- **Effective strategies for measuring youth behaviour**
- **Measures for use in research and evaluation (Part V)**
Part I:
Current Perspectives on Substance Use Prevention
Part I: Current Perspectives on Substance Use Prevention

1.1. Approaches to substance use prevention (15)

Informed choice vs. abstinence-based approaches


Through comparative socio-historical analysis of American school-based drug education, this review critically examines past perspectives and practices and how they shaped current programs. Among the key findings emerging from this analysis: Contrary to the popular belief that drug education began in the 1960s, its roots actually go back at least 115 yrs to the advent of compulsory temperance instruction. Although the particular substances targeted by such approaches have changed, the underlying approaches and dominant “no-substance-use” injunction has not. Despite the existence of “informed choice” approaches, throughout much of this period evaluation efforts continue to be constrained by the limited dictates of “no-use” perspectives. A pragmatic alternative to contemporary “Just Say No” education is offered that strives to minimize potential harm resulting from the uninformed misuse of licit and illicit substances. A unique evaluative strategy designed to assess the effectiveness of this form of “informed choice” or “harm reduction” drug education is discussed.

Legend

★★ Indicates an effective approach; evaluators found these programs or strategies to be effective. Rigour was utilized in the methodology and the programs may appear on “evidenced-based practices” databases.

★ Indicates a promising practice; these programs or strategies show promise, but have not yet undergone extensive evaluation.

✔ Interesting position or discussion article on issues and practices in prevention.

N.B.: Titles that are shaded (15) are highly recommended reading.

The recent eruption of news stories covering the poor evaluation results of the Drug Abuse Resistance Education (D.A.R.E.) program, the most widely implemented youth drug prevention program in the United States, coupled with the even more recent speculation that adolescent drug use may again be on the rise, has focused much attention on substance abuse prevention programs administered in school settings. It is not uncommon to find school-based prevention in the spotlight, as schools have traditionally been the site of both alcohol and drug education and the collection of adolescent substance use data.


Comments on an article by McBride et al (see record 2004-11270-003). McBride et al provide two strong contributions to the school-based drug prevention literature. First, the use of a control trial design that accounts for school-level effects provides robust evidence as to how resources and efforts should be expended to combat adolescent alcohol use and associate problems, and secondly its focus on harm minimization rather than abstinence as a programme goal is innovative. One question that remains to be answered is whether the harm minimization philosophy was responsible for the behavioural changes identified, or if these differences resulted from a well-organized and resourced intervention. The fact that most comparison schools appear to have also implemented resources based on harm minimization is not persuasive. Schools have long played a role in addressing how to reduce alcohol use and its associated harms among adolescents. The possibility exists that abstinence-based approaches may be too simplistic to tackle this complex issue. Other strategies warrant trial and this research indicates harm minimisation approaches are worthy of further investigation.


Reply by the current author to the comments made by Wayne M. Harding (see record 2007-03173-002), Mike Ashton (see record 2007-03173-003), Colin Mangham (see record 2007-03173-004) and Richard Velleman (see record 2007-03173-005) on the original article (see record 2007-03173-001). In addressing the issue of the UK government's focus on harm reduction strategies rather than drug prevention strategies, the author wholeheartedly agrees with Harding in lamenting the lack of empirically based discussions of drug policy within the UK and elsewhere. He also believes Ashton's response raises an important issue, namely the degree to which drug treatment services and drug policy have embraced harm reduction ideas within the UK. The author commends Mangham for usefully identifying key elements of an effective prevention paradigm. And finally, the author addresses Velleman's criticism by noting that Velleman has interpreted his original article as a call for the focus on harm reduction to be dropped and replaced with a focus on drug prevention. But the author replies that Velleman is missing the important question, namely, why have the existing harm reduction services largely failed to reduce the harms of continued drug use and whether it is now time to make drug prevention rather than harm reduction the cornerstone of drug policy and practice.
Most drug prevention programs, such as school-based drug education and mass media campaigns, aim to discourage individuals not to use drugs. These strategies have had mixed, often disappointing, results. Three inter-related areas of research indicate that a broader view of how to prevent drug problems is needed. The first is research on the etiology of drug abuse, problem behavior, crime and psychosocial disorders among young people. The second is research on developmental transitions in child and adolescent development. The third is research on macro-environmental influences—economic, social and physical environmental influences—on health and social outcomes. Implications for public policy are also discussed.


Cannabis is typically used experimentally or intermittently in adolescence and early adulthood, and is generally discontinued by the mid- to late-20s. While only a minority proceed to long-term regular use, it is by far the most widely consumed illicit drug in many western countries. Since 1985, Australia's official policy on cannabis and other drugs has been one of harm reduction (HR). There is a spirited debate in Australia and elsewhere about cannabis-related harm. Points of contention include: claimed increases in the potency of cannabis; what legislative responses should apply to its possession, use, and cultivation; its use as a therapeutic agent; and the most appropriate responses to adolescent use. There is also controversy about the definition and scope of HR. This article takes a fairly broad look at cannabis-related harm and associated HR strategies. Issues discussed include: health-related harm, probable acute and chronic harms, high-risk groups, health-related HR, legal harm, harms associated with cannabis law enforcement, legal issues for cannabis users, and assessing the effectiveness of HR for cannabis.


A major proportion of the disease burden and deaths for young people in developed nations is attributable to misuse of alcohol and illicit drugs. Patterns of substance use established in adolescence are quite stable and predict chronic patterns of use, mortality, and morbidity later in life. Findings were integrated of systematic reviews to summarise evidence for interventions aimed at prevention and reduction of harms related to adolescent substance use. Evidence of efficacy was available for developmental prevention interventions that aim to prevent onset of harmful patterns in settings such as vulnerable families, schools, and communities, and universal strategies to reduce attractiveness of substance use. Regulatory interventions aim to increase perceived costs and reduce availability and accessibility of substances. Increasing price, restricting settings of use, and raising legal purchase age are effective in reducing use of alcohol and tobacco and related harms. Screening and brief intervention are efficacious, but efficacy of a range of treatment approaches has not been reliably established. Harm-reduction interventions are effective in young people involved in risky and injecting substance use.
Peer education and social influence approaches


Drug education programs that rely on an abstinence based philosophy neglect, and may even contribute to, the potentially adverse consequences experienced by young people who already engage in this potentially health-compromising behaviour. A predominant focus of drug research during the initial wave of rising cannabis use by young people in the 1960's and 1970's, was centred on identifying the factors that contributed to this trend. Less attention has been devoted to uncovering those factors that may inhibit the progression to high-risk levels of use and particularly whether their impact differs for adolescent males and females. In spite of the questionable effectiveness, formal control mechanisms (i.e., criminal laws) and a reliance on prevention-based drug education remain primary approaches for combating drug use. This paper identifies a sub-group of adolescents already using cannabis and estimates the effects of peers, social disapproval and perceived health effects on inhibiting the escalation of use to problem levels. The results suggest that the risk for problem cannabis use among adolescents may be attenuated by some of these informal control items. The findings also suggest however, that the effects of these factors may be different for males and females. The implications for drug education initiatives are discussed.

Midford, R. (2010). Drug prevention programmes for young people: Where have we been and where should we be going? *Addiction, 105*(10), 1688-1695.

Aim: Substance use by young people has long been a concern of western society, but opinion is mixed as to which prevention approach offers the greatest benefit, and whether indeed there is any benefit at all. This paper reviews the nature of prevention programmes, the research evidence that underpins these programmes and the prevention objectives against which effectiveness is measured. The aim of this is to create better understanding of the elements that maximize programme effectiveness, what can be achieved by prevention programmes and how programmes can be improved. Findings: There is a range of prevention approaches for which there is evidence of effectiveness. Some are classroom-based; some focus upon parenting; some have substantial whole-of-school and community elements; and some target risk and protective factors in early childhood. All, however, are based substantially on the social influence model. In an attempt to improve practice lists of effective programmes have been developed, but there are concerns about the science behind selection. On balance, there is consistent evidence that social influence prevention programmes do have a small, positive effect on drug use, but this then raises the question as to whether harm, rather than use, would be the more worthwhile target for prevention. Prevention that seeks to reduce harm has been demonstrably effective, but has found little support in some jurisdictions. Conclusion: Research has created a progressively better understanding of how to optimize programme effectiveness and what can be achieved realistically by even the most effective programmes. However, further research is required to identify which, if any, particular approach offers greater promise. The effectiveness of harm reduction should be compared with more traditional abstinence and the additional effects of whole of school, parent and community elements need to be measured more accurately. Contemporary social influence prevention programmes are flawed, but the approach is still the best way of influencing drug use behaviour in young people as a whole. Evidence-based refinement is the best option for greater benefit.

Comments on an article by Richard Midford (see record 2010-19424-002). Midford provides an overview from a respected researcher of efforts to prevent alcohol-and drug-related harm among young people in Australia and other western nations. These efforts have included classroom approaches, parenting and whole-of-community and school approaches. In this paper he emphasizes particularly the benefits of school-based drug education. He concludes his paper by forewarning of the disadvantages of stepping away from harm reduction as the mainstay for Australian prevention policy. Midford’s paper emphasizes school or classroom drug education programs, based upon the social influence model. He appears less convinced that the cost effectiveness of school drug education is enhanced through supplementation with additional parent education and community components. The added complexity and cost of coordinating these additional elements has failed in many evaluations to translate to additive prevention benefits. Midford's consideration of the potential for tension between abstinence and harm reduction within prevention policy is welcomed and harm reduction, rather than abstinence, should be the mainstay of prevention policy. However, the position here is that there can be benefits where abstinence is given prominence within alcohol and drug prevention policies.


The development of drug education for young people in the UK has been the subject of various policy statements in recent years. With the publication of the Government White Papers research has drawn attention to the potential benefits of peer education as a method of drug prevention due mainly to the credibility of young people with their peers. This credibility might be based on age alone, or may also involve credibility stemming from the young person’s own drug use, past or present. This paper discusses issues relating to the effectiveness of peer drug education with particular reference to two evaluations carried out recently in South West England; brings together the most recent literature on peer education; and considers the appropriateness of different approaches in schools and youth work settings. This paper contributes significantly to the debate on the use of peer education as a health education approach.


Presents an operational framework for defining and interpreting peer interventions and peer education. The framework is based on fieldwork for research assessing the value of peer-led approaches as a means of delivering drug prevention in a variety of projects with students and adults. The author recommends that consideration should be given to what it is that constitutes "peerness", the aims and methods of an intervention, and the way in which peer educators are involved. Reflecting a gap in the existing literature, particular attention is paid to the nature of peer involvement. A key distinction is posited between peer development and peer delivery, and it is suggested that there be a good fit between location (school, community, etc.), approach and client group.
Strengths-based prevention approaches: Positive Youth Development and Social Emotional Learning


Substance use among youth remains a major public health and safety concern. One fundamental way to address youth substance use prevention is to keep young people on a positive trajectory by engaging them in positive activities from early years of their childhood. In this article, the author offers a best practice analysis of systematic review about 12 selected community-based preventions, and proposes policy changes towards incorporating a strengths perspective. A substantive, methodological, and value-based critical analysis of the strongly effective preventions was conducted. A strengths-based positive youth development perspective is specified as one feasible needed improvement and subsequent policy changes in the school district as well as in the local, state, and federal levels are proposed along with the suggestion of a mandated community youth participation strategy.


This article explores the recent approach to youth research and practice that has been called positive youth development. The author makes the case that the approach grew out of dissatisfaction with a predominant view that underestimated the true capacities of young people by focusing on their deficits rather than their developmental potentials. The article examines three areas of research that have been transformed by the positive youth approach: the nature of the child; the interaction between the child and the community; and moral growth. It concludes with the point that positive youth development does not simply mean an examination of anything that appears to be beneficial for young people. Rather, it is an approach with strong defining assumptions about what is important to look at if one is to accurately capture the full potential of all young people to learn and thrive in the diverse settings where they live.


Discusses barriers and opportunities concerning social and emotional learning (SEL) programs in schools. SEL refers to the knowledge and skills that children acquire through social and emotional-related education, instruction, activities, or promotion efforts that help them recognize and manage emotion, engage in responsible decision making, and establish positive relationships. Barriers to prevention and promotion program development include: (1) increasing the number of schools employing such curricula; (2) leadership issues in initiating and directing SEL efforts; (3) the emphasis of the Individuals with Disabilities Education Act on remediation rather than prevention and promotion services; and (4) inadequate literature concerning SEL program implementation processes. SEL must become a part of the foundation for and integrated into all teacher education classes. All preservice teachers should complete coursework in SEL skills, and SEL field placements should be available. Skillfully implementing, monitoring, and evaluating well-designed SEL programs will increase the likelihood that these efforts will become institutionalized.
1.2. Effective practices in school-based programs


School-based drug prevention is a central component of drug control strategies. This paper assesses quantitatively its contributions in the United States from a social policy perspective. The social benefits per participant stemming from reduced drug use (~ $840 from tobacco, alcohol, cocaine and marijuana) appear to exceed the economic costs of running the programs (~ $150 per participant); while the benefits associated with reduced cocaine use alone (~ $300) exceed the costs, the corresponding figure for marijuana (~ $20) is small. Even if prevention reduced the use of other illicit drugs (e.g. heroin) by as much as it reduced use of cocaine, the majority of benefits would still stem from reductions in use of tobacco and alcohol, which has implications for how school-based drug prevention is funded and whether it is perceived more as a weapon in the war on illicit drugs or as a public health measure. Specific numeric results are subject to considerable uncertainty, but the basic character of the conclusions appears to be robust with respect to parameter uncertainty. The greatest uncertainties concern the permanence of prevention's effects and how to value instances of initiation being deferred but not completely prevented.


Drug prevention in schools is a top priority in most Western countries and several well-designed studies have shown that prevention programs have the potential of reducing drug use in adolescents. However, most prevention programs are not effective and there are no general criteria available for deciding which program is effective and which is not. In this systematic review of the literature, the current scientific knowledge about which characteristics determine the effectiveness of drug prevention programs is examined. Three types of studies are reviewed: meta-analyses (3 studies were included), studies examining mediating variables of interventions (6 studies), and studies directly comparing prevention programs with or without specific characteristics (4 studies on boosters, 12 on peer- versus adult-led programs, and 5 on adding community interventions to school programs). Seven evidence-based quality criteria were formulated: the effects of a program should have been proven; interactive delivery methods are superior; the "social influence model" is currently the best; focus on norms, commitment not to use, and intentions not to use; adding community interventions increases effects; the use of peer leaders is better; and adding life skills to programs may strengthen effects.


55 evaluations were reviewed in a meta-analysis of the effects of mentoring programs on youth. Overall, findings provide evidence of only a modest or small benefit of program participation for the average youth. Program effects are enhanced significantly, however, when greater numbers of both theory-based and empirically based “best practices” are utilized and when strong relationships are formed between mentors and youth. Youth from backgrounds of environmental risk and disadvantage appear most likely to benefit from participation in mentoring programs. Outcomes for youth at-risk due to personal vulnerabilities have varied substantially in relation to program characteristics, with a noteworthy potential evident for poorly implemented programs to actually have an adverse effect on such youth. Recommendations include greater adherence to guidelines.
for the design and implementation of effective mentoring programs as well as more in-depth assessment of relationship and contextual factors in the evaluation of programs.


Drug prevention efforts in elementary schools are widespread. Nonetheless, there are clear challenges that both researchers and practitioners face. Because there may be occasional unintended negative outcomes - statistically these are guaranteed - does not mean all prevention efforts should grind to a halt. It is far better that any observed failures should pave the way for future progress. There are sufficient promising results that provide clues about how to increase effectiveness and decrease unintended harm are already available. However, until a different strategy for moving forward is adopted, progress toward defining appropriate early prevention approaches may be slow to emerge.


As mentoring programs have proliferated, considerable variation in approaches to programmatic mentoring has emerged. Concomitant confusion exists about the context, structure, and goals that constitute mentoring as a distinct intervention. This article presents a brief summary of what is currently known about different approaches to mentoring and proposes a framework that identifies both the common and the specific elements among different youth mentoring approaches. Rather than focusing solely on the participants and contexts of mentoring programs, such as peer- or school-based mentoring, as the key elements that differentiate programs, the authors suggest that more fruitful program development and research will result from a closer examination of the context, structure, and goals of programs, as well as of three critical program elements: content, infrastructure, and dosage. To understand better how and under what conditions mentoring works, program developers and researchers should test hypotheses regarding the influences of these program elements based on theory-driven expectations about the interrelationships among proximal, enabling, and distal outcomes of mentoring programs.


Drug misuse in Northern Ireland, like many parts of the world, is becoming one of the major issues facing society today. A first stage to addressing this problem is effective drugs education and prevention strategies to school-aged young people. A survey of a range of education providers including mainstream and special needs schools, and school exclusion projects, suggests that all education providers aim to provide drugs education. Within mainstream schools, drugs education and prevention for young people with special education needs is provided within an existing framework developed for all school children. In contrast, special education providers deliver this facility through an approach developed to meet the specific requirements of their client group. The findings suggest that whilst expertise in the delivery of drugs education and prevention strategies exist for young people with special education needs, it may not be specifically targeted at all of them whilst attending school.
School drug education is a major component in the drug strategies of almost all developed countries, primarily because of public concern about alcohol and other drug use by young people and the need of elected governments to be seen to be addressing the problem. This special edition on drug education and other prevention programs for students explores many of the issues of interest to the field at the moment and the papers offer a range of evidence and insights as to how the approach can be improved on a number of different levels. The papers range from the theoretical to the empirical in their approach and from national policy to classroom practice in their focus. Even in this broad sweep, however, it cannot deal with all the issues of relevance to the development of more effective prevention programs for students. What the series of papers has done is raise a number of critical issues, at a number of different levels that need to be addressed if drug prevention programs are to ever fulfil their potential. Finally, research needs to investigate how the effectiveness of research demonstration programs can best be preserved when delivered in everyday school settings.


This paper identifies the best characteristics of gateway drug prevention programs that have the effect of preventing or reducing the use of alcohol, tobacco, and marijuana by adolescents. A comprehensive literature review of the performance of school-, family-, and community-based drug prevention programs covering the last 20 years was conducted to identify the best characteristics of successful programs. Six characteristics were identified that are common to successful drug prevention programs: involving parents; teaching life and resistance skills and normative education; enacting laws and policies against adolescent drug use; encouraging peer participation; conducting a media campaign; and retaining program participants. School administrators, parents, and community leaders can use the knowledge in this paper to design drug prevention programs that can accommodate specific risk factors and types of gateway drug use by adolescents.


This investigation used meta-analytic techniques to evaluate the effectiveness of school-based prevention programming in reducing cannabis use among youth aged 12 to 19. It summarized the results from 15 studies published in peer-reviewed journals since 1999 and identified features that influenced program effectiveness. The results from the set of 15 studies indicated that these school-based programs had a positive impact on reducing students’ cannabis use (d = 0.58, CI: 0.55, 0.62) compared to control conditions. Findings revealed that programs incorporating elements of several prevention models were significantly more effective than were those based on only a social influence model. Programs that were longer in duration (≥15 sessions) and facilitated by individuals other than teachers in an interactive manner also yielded stronger effects. The results also suggested that programs targeting high school students were more effective than were those aimed at middle-school students. Implications for school-based prevention programming are discussed.

This article examines the effectiveness of school-based drug prevention programs in preventing illicit drug use. This article reports the results of a systematic review of the evaluation literature to answer three fundamental questions: (1) do school-based drug prevention programs reduce rates of illicit drug use? (2) what features are characteristic of effective programs? and (3) do these effective program characteristics differ from those identified as effective in reviews of school-based drug prevention of licit substance use (such as alcohol and tobacco)? Using systematic review and meta-analytic techniques, characteristics of school-based drug prevention programs that have a significant and beneficial impact on ameliorating illicit substance use (i.e., narcotics) among young people were identified. Successful intervention programs typically involve high levels of interactivity, time-intensity, and universal approaches that are delivered in the middle school years. These program characteristics aligned with many of the effective program elements found in previous reviews exploring the impact of school-based drug prevention on licit drug use. Contrary to these past reviews, however, this analysis suggests that the inclusion of booster sessions and multifaceted drug prevention programs have little impact on preventing illicit drug use among school-aged children. Limitations of the current review and policy implications are discussed.


Ingredients of adolescent school-based drug prevention programs needed to reduce, prevent or delay adolescent substance abuse are presented in the historical context of three meta-analyses. Non-interactive programs showed only a 4% reduction in prevalence rate, while Interactive programs showed a 21% reduction in prevalence rate. Small Interactive programs were found to be most successful; most probably due to program protocol being more closely followed. Essential program content and necessary features of the successful Interactive programs are identified.


This paper reports on a meta-analysis of 207 universal school-based drug prevention programs that compared the self-reported drug use of treatment to control or comparison youth. Programs are classified into Interactive and Non-Interactive groups based on a combination of content and delivery method. Weighted categorical and weighted regression methods have been used to determine the attributes that most effectively reduce, delay, or prevent drug use, including program size, type of control group and leader attrition, target drug, intensity, grade, special population and level of drug use. Program type and size are found to be significant predictors of effectiveness. Non-interactive lecture-oriented prevention programs that stress drug knowledge or affective development show small effects, Interactive programs that foster development of interpersonal skills show significantly greater effects that decrease with large-scale implementations.


Objective. The purpose of this study was to compare the effects of a single drug, i.e., alcohol, against a multiple drug preventive intervention. Methods. A controlled trial was conducted with 448 8th grade students (mean age = 13 years old) from an inner-city middle school (n = 216) and a
rural junior high school (n = 232) in 2000-2001. Students were randomized within school, and 3-month post-intervention follow-up data were collected. Results. Two risk/protective factors were found to differ significantly in favor of youth receiving the single drug alcohol intervention (p's = 0.03), while the frequency of alcohol use and two additional risk/protective factors approached significance (p's < 0.10). Conclusion. These findings support the potential efficacy of a brief, single drug preventive intervention over a brief, multi-drug intervention in producing short-term alcohol outcomes for adolescents, and indicate differential effects of interventions for subgroups of substance using youth.


Researched effective drug prevention strategies for school-aged populations from drug prevention programs funded by the USDHHS Center for Substance Abuse Prevention (CSAP). Nine directors and staff members from model CSAP-funded programs were interviewed. 15 strategies that focus on building trusted relationships, selecting well-qualified staff using existing communication networks, and providing timely evaluation feedback are discussed, with examples from the agencies cited. It is concluded that formulating effective partnerships that support both the goals of the outside agency with drug prevention resources and the mission of a school can contribute toward effective school-based drug prevention programs.

1.3. Strategies for involving families and communities


Although advances in prevention science over the past two decades have produced a growing list of tested and effective programs and policies for preventing adolescent delinquency and drug use, widespread dissemination and high-quality implementation of effective programs and policies in communities has not been achieved. The Community Youth Development Study (CYDS) is a randomized, community-level trial of the Communities That Care (CTC) system for promoting science-based prevention in communities. This study compares 12 community prevention coalitions implementing the CTC system in 12 intervention communities as part of the CYDS to prevention coalitions located in the 12 control communities. As hypothesized, the CYDS coalitions implemented significantly more of the CTC core intervention elements, and also implemented significantly greater numbers of tested, effective prevention programs than the prevention coalitions in the control communities. Implications of the findings for efforts to achieve widespread dissemination of effective prevention programs, policies, and practices are discussed.


Universal community-oriented interventions are an important component in the prevention of youth health and behavior problems. Testing the universality of the effects of an intervention that was designed to be universal is important because it provides information about how the program operates and for whom and under what conditions it is most effective. The present study examined
whether the previously established significant effects of the universal, community-based Communities That Care (CTC) prevention program on the prevalence of substance use and the variety of delinquent behaviors held equally for boys and girls and in risk-related subgroups defined by early substance use, early delinquency, and high levels of community-targeted risk at baseline. Interaction analyses of data from a panel of 4,407 students followed from Grade 5 to Grade 8 in the first randomized trial of CTC in 12 matched community pairs suggests that CTC reduced students' substance use and delinquency equally across risk-related subgroups and gender, with two exceptions: The effect of CTC on reducing substance use in 8th grade was stronger for boys than girls and the impact of CTC on reducing 8th-grade delinquency was stronger for students who were nondelinquent at baseline. [Correction Notice: An erratum for this article was reported in Vol 11(4) of Prevention Science (see record 2010-23348-008). In the original article, there was an error in Table 4. The correct Table 4 is given in the erratum.]


Poor participation rates represent one of the most serious problems facing family-based drug-use prevention programs. Strategies involving incentives have been used to increase recruitment and retention of the target population of such interventions, but in Spain, such strategies for modifying behavior are unusual. The goal of the research was to study the use of small financial incentives (a $10 voucher) as a strategy to increase attendance and reduce dropout in a family drug-prevention program applied in the school context. Participants were 211 pupils (aged 12-13) and their parents. The results show that small financial incentives can be useful to increase the attendance of families in prevention programs and to reduce dropout.


Recent advice suggests that single-level, single-strand interventions are less effective in preventing or reducing harm from drug misuse than multi-level multi-agency approaches. This paper describes one aspect of a community-focused initiative in drug education. The overall aim of the initiative was to support and train key adults within the community to implement locally relevant schemes of work and drug-related policies. In this paper, a description of the training offered to parents, school staff and governors in communities in Essex is provided. A second paper will describe the intensive in-service training for health education co-ordinators and the action research carried out by teachers which led to the development of a minimum entitlement curriculum for three different communities within the same county. This combination of research, training and development as a new approach to drug prevention in local communities is outlined.


Low participation rates constitute a serious problem faced by family drug abuse prevention programs. In this study, factors related to participation in a Life Skills Training program implemented in three schools in Spain are analyzed. Participants in the study were 485 pupils aged 12-14 years and their respective parents. The variables that predicted participation in the program were: number of children and educational level of parents, children's drug use, family conflict,
The results from Spain are similar to those found in international studies, and indicate that the families most at risk of drug use are those least likely to participate in prevention programs. There is a need for strategies to increase participation in prevention programs of the families most at risk.


Reviews research to compare US and UK drug prevention and education programs that have included parents either directly or indirectly within intervention strategies. The goals of the review are to discuss research related to: (1) evidence that involves families in the web of influence around substance use by children and adolescents, (2) implications for practice in light of the concepts of risk and resilience, (3) targeting interventions through a multi-level perspective on risk management, (3) meta-analyses of evaluated programs, (4) model programs for which success has been claimed in changing drug use, and (5) critical issues for policy and practice in the identification, recruitment and retaining of parents within drug prevention contexts. It is suggested that, in terms of what works, the evidence from the UK (England and Wales) is limited, and the situation regarding published evaluated accounts of prevention programs in the US is qualitatively and quantitatively different. Specific programs discussed include DARE (UK), Project STAR, Seattle Social Development Project, Project Family, Strengthening Families Programme, Focus on Families, and Adolescent Transitions Programme.


Recent advice suggests that single-level, single-strand interventions are less effective in preventing or reducing harm from drug misuse than multi-level multi-agency approaches. Part 1 described one aspect of a community focused initiative in drug education. The overall aim of the initiative was to support and train key adults within the community to implement locally relevant schemes of work and drug-related policies. In the previous paper, a description of the training offered to parents, school staff and governors in communities in Essex was provided. This second paper reviews both the guidelines for effective teaching and learning in drug education and the importance of effective teacher education. An action research approach to in-service training for health education coordinators which led to the development of a minimum entitlement curriculum for three different communities within the same county is outlined.


It is becoming increasingly common for community teams or coalitions to implement programming for children and families designed to promote positive youth development and prevent adolescent problem behaviors. However, there has been only limited rigorous study of the effectiveness of community teams’ programming efforts to produce positive outcomes. This study employed a community-level randomized control design to examine protective parent and youth skills outcomes of evidence-based preventive interventions selected from a menu and delivered by community teams supported by a community-university partnership model called PROSPER. Twenty-eight rural communities in two states were randomized across intervention and control conditions. Data were collected through written questionnaires that were completed by
approximately 12,000 middle school students in the fall of the 6th grade, prior to intervention delivery, and again in the spring of the 7th, 8th, and 9th grades. Positive intervention effects were found for youth, parent, and family outcomes (e.g., association with antisocial peers, child management, parent-child affective quality) at each post-intervention assessment point. Improvements in these family and youth skill outcomes are expected to support long-term reductions of adolescent problem behaviors, such as substance abuse. Editors’ Strategic Implications: In this important and well controlled trial, the authors demonstrate that university partnership-supported community teams, especially when supported with ongoing technical assistance, can continue to produce positive outcomes even after much of the control over delivery of programs is turned over to representatives of the communities in which they are implemented.


Involving parents of high-risk youth in community-based intervention programs is extremely challenging. This article presents six groups of strategies for recruiting and retaining parents of high-risk youth in a parent involvement program called the Family Advocacy Network (FAN Club). The FAN Club program accompanied a drug prevention program for the parents’ early adolescent children who were members of Boys & Girls Clubs. Strategies presented are based on a longitudinal study that found positive program effects for youth (mean age 11.35 yrs at baseline) in Boys & Girls Clubs that offered the FAN Club with the three-year youth drug prevention program and monthly youth activities. Strategies are: (1) identify the right person to lead the program; (2) clearly convey the purpose of the program; (3) build relationships of mutual trust, respect, and equality; (4) create parent ownership and group bonding; (5) provide easy access, incentives, and reminders; and (6) be flexible but persistent.


There is profound value in involving youth in the cultural adaptation of evidence-based drug prevention curricula. Presently, despite the existence of evidence-based programs, few community settings are aware of, utilizing, and following evidence-based curricula in practice. Therefore, to transfer such programs to practice, systematic adaptation procedures should be further developed, utilized, and evaluated. It is recommended that community settings adapt curricula to meet their youths’ unique needs to be effective, particularly with diverse cultures.


This article explored retention patterns, as well as factors that predicted these patterns, in the evaluation of a relationship-based substance abuse prevention intervention study that targeted inner-city African American youth. A total of 851 contacts were made to retain 82% (n = 104) of the baseline sample (N = 127) in the evaluation. Results from multinomial regression analyses indicated that participants who were retained in the evaluation were more likely to perceive alcohol, tobacco, and other drug use as less risky and were more likely to report higher levels of family supervision than were evaluation attritions. Those who were easy to retain reported lower family
conflict and fewer family relocations during the past year than those who were difficult to retain. Implications of these findings for developing retention strategies, as well as future research, are discussed.

1.4. Policy-related literature


Purpose To compare risk and protective factors that influence youth substance use in Australia and the United States. The two countries have different policy orientations toward substance use: Australia has adopted harm-reduction policies, and the United States has adopted abstinence-focused policies. Methods Cross-sectional survey data were collected from independent samples of adolescents in the states of Maine (N = 16,861; 53% female, 7% Non-white) and Oregon (N = 15,542; 51% female, 24% Non-white) in the United States and Victoria in Australia (N = 8442; 54% Female, 11% Non-white) in 1998 (Maine and Oregon) and 1999 (Victoria). Chi-square tests, t-tests, effect size comparisons, and logistic regression analyses that accounted for age and gender were used to investigate cross-national similarities and differences in: (a) rates of cigarette, alcohol, and marijuana use; (b) levels of risk and protective factors; and (c) magnitudes of associations between risk and protective factors and substance use. Results More adolescents in Victoria reported using cigarettes and alcohol, whereas more of the U.S. adolescents reported using marijuana. Exposure to risk and protective factors was generally similar in the cross-national samples. However, adolescents in Maine and Oregon perceived handguns to be more readily available, reported more participation in religious activities, and were higher in sensation-seeking and social skills; and adolescents in Victoria had more favorable attitudes toward drug use and reported community norms and parental attitudes more favorable to drug use. Most of the risk and protective factors were strongly associated with substance use to a similar degree in Victoria, Maine, and Oregon. However, among adolescents in Maine and Oregon peer/individual risk and protective factors associated with social detachment were more strongly related to substance use, and among adolescents in Victoria, family protective factors were less strongly related to alcohol use. Conclusions Inter-country influences on youth substance use are generally similar despite different policy directions. Existing differences suggest that the abstinence policy context is associated with higher levels of illicit drug use and stronger relations between individual indicators of social detachment and substance use, whereas the harm reduction policy context is related to more cigarette and alcohol use, possibly from exposure to normative influences that are more tolerant of youth drug use.


This paper addresses three types of drug policies: drug laws, drug prevention strategies, and drug treatment strategies that might be used to improve drug policies. For each of these three categories, the paper discusses what criminological research tells us about the best practices. Research suggests that drug abuse prevention and treatment have statistically and clinically significant effects. The terms 'prevention' and 'treatment' are, however, often used indiscriminately and with reference to many different concepts. To assume that everything that is called prevention or treatment is effective would be foolish: not every drug prevention program is effective; not every
treatment program has an effect in terms of reducing recidivism. Research has made it possible to identify successful prevention and treatment programs for drug abusers. However, the programs that research would suggest are not always those chosen by practitioners or widely funded by policymakers.


Aims: Most national drug policies target both the supply side and the demand side of illicit drug use. Although such policies are intended to affect individual choices, they by definition operate on a national level and cannot be evaluated solely on the basis of individual-level differences. This study aims to evaluate the impact of country-level differences in the availability and perceived risk of cannabis use on individual-level adolescent cannabis use. Method: The study is based on an analysis of 84,711 students in 31 European countries. Multilevel modelling techniques are used to estimate the effects of country-level differences in the perceptions of availability and risk among non-users on individual-level odds of 30-day cannabis use. Findings: On the individual level, adolescents who use cannabis find it easier to obtain and less risky if they have used the drug. Controlling for these individual-level associations, adolescents are also found to be less likely to use cannabis in countries where non-users report less availability and more risks associated with cannabis use. Conclusions: These findings support the notion that both supply reduction and demand reduction may reduce the prevalence of adolescent substance use.


Background: While there is mounting international acceptance of harm reduction approaches and growing support for policies that balance enforcement with more health-focused interventions, in many settings these developments are not reflected in policy. In October 2007, the Canadian federal government launched a new $64 million dollar “National Anti-Drug Strategy” in which two-thirds of the new monies was reportedly directed towards drug prevention and treatment initiatives. Methods: However, contrary to the impression left by a host of federal politicians, including the Prime Minister, that this new strategy was investing significantly in drug prevention and drug treatment, this analysis finds that when base funding is considered additional monies provided through the new federal National Anti-Drug Strategy only marginally shifts the allocation of funds within each category. Results: Specifically, law enforcement initiatives continue to receive the overwhelming majority of drug strategy funding (70%) while prevention (4%), treatment (17%) and harm reduction (2%) combined continue to receive less than a quarter of the overall funding. Conclusion: These findings suggest that the Canadian government is failing to invest resources in evidence-based drug policies.


Issues: A tremendous growth occurred in the reported drug use and abuse in Romania from 1995 to 1999. Lack of concern by government and little policy attention contributed to the surprising delay of drug policy and drug prevention system development. General public stigmatize drug users and drug consumption is considered a matter of personal fault and responsibility. There is some but not sufficient research and evaluation on drug use, abuse problem. Approach: Drug use,
abuse and prevention are discussed from research-based, user-focused and prevention system development perspectives. Prevalence and trends of drug use, abuse in the past decade (1995-2005) are summarized. Prevention issues are discussed based on research data from adolescents, parents and teachers. The Romanian primary drug prevention system has been evaluated based on previous experiences in drug use prevention activities carried out in schools and recreational environments. Key Findings: Public and scientific perspectives on drug consumption in Romania, between 1995 and 1999, were dominated by an idealistic, non-realistic perception. Since 1995, drug use among adolescents increased almost four times in less than 4 years. The first law against drug traffic and consumption was issued only in 2000. Now primary drug prevention strategies are in action, but in general they are lacking standard evaluation procedures. Implications/Conclusion: Conclusions are drafted for new perspectives in prevention activities. More long-term, user-focused, demand-centred prevention activities should be carried out in more and more diversified settings and evaluation should be thoroughly considered.


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.


Contends that primary drug prevention in Germany has been in a constant state of transition since the early 1970s. Five consecutive phases can be identified: (1) drug deterrence and repression; (2) drug education and drug information; (3) primary drug prevention through alternatives to risk-taking, and the strengthening of personal resources; (4) primary drug prevention through strengthening of personal and social resources, promotion of resistance and life skills; (5) primary drug prevention through strengthening of personal and social resources, promotion of resistance and life skills, the promotion of harm reduction and competence in risk-taking with young people who may already consume legal or illegal drugs. During the last decade, the concept of health promotion, with its integration of individual, contextual and structural prevention, has served as a guide. Beginning in the mid-1990s, secondary and tertiary prevention efforts have attracted growing interest. The integrative concept of "risk-taking competence," which introduces harm reduction approaches into primary prevention strategies, is favored in contemporary discussion and practice.

Discusses drug education in Australia. The authors state that recently there has been an increase in public funds for drug education, and the accompanying rhetoric asserts that it is to enable abstinence among young people. The authors maintain that this contradicts some State Government education guidelines endorsing harm minimization. Focus is given to evaluation research in school-based drug education which supports this claim. Four models (information, values/decision-making, social competency, and harm minimization or harm reduction models) of drug education are described and examined. Research suggests that the predictors of adolescent drug use are social and personal. Further, schools appear to have little effect on these predictors because they mix-and-match activities from different models and exposure is too slight for major effects. Factors contributing to the mismatch between public rhetoric and the evaluation research literature are examined.


Aims: To assess (1) the alcohol and other drug (AOD) consumption patterns of adolescent new entrants to the Australian workforce and (2) the association between these consumption patterns and workplace factors. Methods: A cross-sectional survey of 300 first-year apprentices (aged 15-22 years) employed in South Australian workplaces was conducted. Findings: More than 40% of apprentices surveyed reported cannabis and alcohol consumption patterns that placed them at risk of potential harm. In addition, 19% reported drinking alcohol and 6.7% reported using cannabis during work-related hours. Workplace alcohol availability and the existence of workplace AOD policies were significantly associated with apprentices’ consumption patterns. Apprentices employed in workplaces where alcohol was available used alcohol more often than those reporting no alcohol availability at work. Apprentices reporting an alcohol policy at their workplace reported less alcohol use compared to apprentices reporting no policy. Apprentices reporting a drug policy at their workplace reported lower levels of cannabis and alcohol use compared to those reporting no policy. Conclusions: Workplace factors, in particular workplace AOD policies, were significantly associated with adolescent AOD use both at and away from the workplace. These findings indicate that the workplace has potential as a setting for prevention strategies design to minimize AOD-related harms.


Due to ongoing managerial and decentralizing trends in public policy, responsibility for drug prevention is continuously being devolved from one level to another, from the European Union all the way down to the civil society. In this paper, a drug prevention program in Helsinki represents a realization of the EU drugs strategy due to similar rhetoric and goals: co-ordinating multi-agency co-operation. An analysis of contradictions inherent in this setting is based on interviews of the program workers as well as representatives of governmental and national drug-prevention agencies. The analysis results show that 'almost anything goes' because no single body has the legitimacy to prioritize any particular approach over any other. The situation easily results in either ineffective indecision or overdoing preventive enthusiasm that simplifies the drugs issue. This vicious circle is difficult to break. In order to provide more realistic prevention, a systematic increase in the knowledge base of the practitioners in the drug field is needed. Simultaneously, the issue
becomes political, requiring authority and agreement on concrete guidelines at a national level—issues that prevailing public policy tries to evade.


The United States and the Netherlands have antithetical marijuana control policies. The United States’ laws criminalize the possession of even small amounts of marijuana, while the Netherlands have maintained, over the past several decades, two relatively liberal marijuana policies implemented during the 1970s and 1980s. According to the literature on environmental drug prevention strategies, the Dutch policy should result in increased marijuana use because of the drug’s amplified availability, while the United States’ policy should result in reduced marijuana use. The empirical evidence addressing these hypotheses, however, is sparse. The stark approaches to marijuana control in the United States and the Netherlands offer the opportunity for an intricate legal and social science analysis. An examination of these divergent policies is important because it implicates, first, the extent to which marijuana, a relatively non-serious drug of abuse, is controlled, and second, the extent to which environmental drug prevention strategies are realized by policymakers in the United States and in the Netherlands. Part I of this essay examines the short- and long-term physical and psychological effects of marijuana use. Part II, first, summarizes the marijuana control philosophy in the United States, and second, examines the prevalence of marijuana use in the United States. Part III first, summarizes the Dutch philosophy on marijuana control, and second, reviews the prevalence of marijuana use in the Netherlands. Part IV discusses the implications of the American and Dutch marijuana control policies in relation to environmental drug prevention strategies. With the absence of sufficient research in the Netherlands, it would be difficult to predict whether enforcing stricter laws would positively impact substance use prevention. In the United States, where there exists extant research along with significant dollars that are spent to attempt to control the marijuana supply, it appears to have made little overall impact on rates of marijuana use.
Part II:
Models of Substance Use Prevention Programs
Part II: Models of Substance Use Prevention Programs

2.1. Informed choice approaches (6)


Say Yes First--To Rural Youth and Family Alcohol/Drug Prevention (SYF) was a 5-year, federally-funded U.S.D.H.S. Center for Substance Abuse Prevention (CSAP) project that involved 859 children in the class of the year 2000. The children in four rural school districts were followed from Grade 4 to Grade 8 from 1991 to 1996. Initial results in a previous publication showed significant lower drug usage in this cohort than comparison students ([1]; see record 1997-04161-004). A follow-up of 120 SYF participants and 136 comparison students in high schools using the National Youth Survey (Follow Up Questionnaire) indicated lower usage of alcohol, tobacco and other drugs for the program students and lower lifetime prevalence of...
marijuana use for program vs. comparison students. SYF students had higher course grades, lower school absenteeism, more positive attitudes toward school, less trouble in school and less negative self-appraisal. Program students also reported greater participation in sports, more family communication and fewer disagreements or arguments with their parents.


The School Health and Alcohol Harm Reduction Project (SHAHRP) aims to reduce alcohol-related harm by enhancing students’ abilities to identify and deal with high-risk drinking situations particularly likely to be encountered by young people. The SHAHRP study has adopted a quasi-experimental research design, incorporating intervention and control groups and measuring change over a 3-yr period. The study involves 2,343 students (13-17-yr-olds) from 14 metropolitan, government secondary schools in Perth, Western Australia. 73.7% of Ss completed surveys at both baseline and 1st follow-up. The intervention is a curriculum-based education program with an explicit harm minimization goal conducted in 2 phases over 2 yrs. The early results of the study demonstrate initial knowledge and attitude change, predicted by the Ss’ involvement in the intervention. A surprising impact of the 1st phase of SHAHRP was the significant difference in alcohol consumption and harms between control and intervention groups, with the SHAHRP group demonstrating a significantly lower increase in alcohol consumption than the control group. Students who were supervised drinkers at baseline and who received the SHAHRP intervention were overwhelmingly represented in the change results.


The School Health and Alcohol Harm Reduction Project (SHAHRP study) aimed to reduce alcohol-related harm in secondary school students. The study used a quasi-experimental research design in which randomly selected and allocated intervention and comparison groups were assessed at eight, 20 and 32 months after baseline. The evidence-based intervention, a curriculum programme with an explicit harm minimization goal, was conducted in two phases over a 2-year period. Main outcomes measured were knowledge, attitude, total alcohol consumption, risky consumption, context of use, harm associated with own use and harm associated with other people's use of alcohol. There were significant knowledge, attitude and behavioural effects early in the study, some of which were maintained for the duration of the study. Intervention students were significantly more likely to be non-drinkers or supervised drinkers than were comparison students. During the first and second programme phases, intervention students consumed 31.4% and 31.7% less alcohol. Intervention students were 25.7%, 33.8% and 4.2% less likely to drink to risky levels from first follow-up onwards. The results of this study support the use of harm reduction goals and classroom approaches in school drug education.
Based on North American evidence that multi-component drugs prevention programmes have an impact on reducing young people's drug taking, the Integrated Programme (IP) was designed and delivered to adolescents (aged 12-17 yrs) in northern England during 1998-1999. The IP was evaluated by comparing the attitudes and drug-taking behaviour of nearly 2000 young people before and after programme delivery. Action sites (which received the IP) and comparison sites (which did not) were randomly allocated once baseline survey measurements had been taken. Controlling for key variables multiple logistic regression was used to measure the odds ratio of drug taking on 20 measures for young people in both action and comparison sites based on a follow-up survey. The results suggested that young people who received the IP were more likely to reduce harder drug use and maintain a softer drug-taking repertoire than those in the comparison sites. However, these 'gains' were small and inconsistent and the IP had no impact on reducing initiation/first trying rates. The results were thus only indicative that such programmes might be effective in the UK context.


Recent research indicates that 3,4-methylene-dioxymethamphetamine (MDMA), also known as 'ecstasy', is becoming increasingly popular as an illicit drug among young people. This study investigated risk and harm reduction practices among recreational ecstasy users. A semi-structured interview with 40 participants was designed to investigate how ecstasy users identify and manage the harms associated with their drug use, and the underlying decision-making process. Overall, the participants identified both positive and negative effects. The reported positive effects predominantly centred around enhanced psychological, physiological and social experiences. However, there were a number of factors that contributed to regulating ecstasy use. These included specific in-group and out-group practices executed within the peer group, preventative harm-reducing practices, shared decision making, and shared responsibility for harm prevention. Recommendations for promoting harm reduction strategies and suggestions for future research are discussed.
Drug Abuse Resistance Education (D.A.R.E.) is the most widely used school-based drug use prevention program in the United States, but the findings of

1 For more reviews of DARE please visit
http://www.drugpolicy.org/library/factsheets/dare/index.cfm

2.2. Abstinence-based approaches


OBJECTIVES. Project DARE\(^\text{1}\) (Drug Abuse Resistance Education) is the most widely used school-based drug use prevention program in the United States, but the findings of

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Program Profile: SCIDUA

SCIDUA was a school-and community-based demonstration project to determine whether school based harm minimization drug education might be acceptable and effective in junior and senior high schools in Nova Scotia. The intervention involved various activities determined by the participants. Results indicated the intervention was appropriate for senior but not junior high school students.

(Poulin & Nicholson, 2005)

Program Profile: DARE

Drug Abuse Resistance Education (D.A.R.E.) is a police officer-led series of classroom lessons taught from Kindergarten through 12th grade. The D.A.R.E. program is more than just drug prevention education; it teaches students good decision making skills to help them avoid high-risk behavior to ensure they grow up healthy, safe and secure.

(www.DARE.com)
rigorous evaluations of its effectiveness have not been considered collectively. METHODS. Meta-
analytic techniques were used to review eight methodologically rigorous DARE evaluations.
Weighted effect size means for several short-term outcomes also were compared with means
reported for other drug use prevention programs. RESULTS. The DARE effect size for drug use
behavior ranged from .00 to .11 across the eight studies; the weighted mean for drug use across
studies was .06. For all outcomes considered, the DARE effect size means were substantially
smaller than those of programs emphasizing social and general competencies and using interactive
teaching strategies. CONCLUSIONS. DARE's short-term effectiveness for reducing or preventing
drug use behavior is small and is less than for interactive prevention programs.

Education (Project DARE): 5-Year Follow-Up Results. Preventive Medicine, 25(3), 307-318.

Background. This article reports the results of a 5-year, longitudinal evaluation of the effectiveness
of Drug Abuse Resistance Education (DARE), a school-based primary drug prevention curriculum
designed for introduction during the last year of elementary education. DARE is the most widely
disseminated school-based prevention curriculum in the United States. Method. Twenty-three
elementary schools were randomly assigned to receive DARE and 8 were designated comparison
schools. Students in the DARE schools received 16 weeks of protocol-driven instruction and
students in the comparison schools received a drug education unit as part of the health curriculum.
All students were pretested during the 6th grade prior to delivery of the programs, posttested
shortly after completion, and resurveyed each subsequent year through the 10th grade. Three-
stage mixed effects regression models were used to analyze these data. Results. No significant
differences were observed between intervention and comparison schools with respect to cigarette,
alcohol, or marijuana use during the 7th grade, approximately 1 year after completion of the
program, or over the full 5-year measurement interval. Significant intervention effects in the
hypothesized direction were observed during the 7th grade for measures of students' general and
specific attitudes toward drugs, the capability to resist peer pressure, and estimated level of drug
use by peers. Over the full measurement interval, however, average trajectories of change for
these outcomes were similar in the intervention and comparison conditions. Conclusions. The
findings of this 5-year prospective study are largely consonant with the results obtained from prior
short-term evaluations of the DARE curriculum, which have reported limited effects of the program
upon drug use, greater efficacy with respect to attitudes, social skills, and knowledge, but a general
tendency for curriculum effects to decay over time. The results of this study underscore the need
for more robust prevention programming targeted specifically at risk factors, the inclusion of
booster sessions to sustain positive effects, and greater attention to interrelationships between
developmental processes in adolescent substance use, individual level characteristics, and social
context.


The long-term effectiveness of Drug Abuse Resistance Education (DARE) was assessed in a 6-yr
followup study. 356 12th-grade students who had received the program in the 6th-grade were
compared with 264 12th-grade students who did not. A survey was used to assess central DARE
concepts such as self-esteem, police bonds, delay of experimentation with drugs, various forms of
drug use, risk perception, and drug use attitudes among the students. No relationship between
prior DARE participation and alcohol use, cigarette smoking, or marijuana use in 12th-grade was
found. However, there was a significant relationship between DARE participation and less use of
illegal, more deviant drugs (e.g., inhalants, cocaine, LSD) in a development sample, but not in a validation sample. A 9th-grade followup study (R. L. Dukes et al, 1996) of the same sample showed no significant differences. This suggests a possible sleeper effect for DARE in reference to the use of harder drugs, especially among males.


This study explores the possibility that any drug prevention program might be considered "evidence-based" given the use of data analysis procedures that optimize the chance of producing statistically significant results by reanalyzing data from a Drug Abuse Resistance Education (DARE) program evaluation. The analysis produced a number of statistically significant differences between the DARE and control conditions on alcohol and marijuana use measures. Many of these differences occurred at cutoff points on the assessment scales for which post hoc meaningful labels were created. These results are compared to those from evaluations of programs that appear on evidence-based drug prevention lists.


Examines 12 postulated mediators of substance use prevention programs to determine the degree to which Drug Abuse Resistance Education (D.A.R.E.) has an effect on those mediators and the degree to which those effects account for behavioral outcomes of the program. The sample was composed of students who were surveyed as 8th graders and again as 9th graders. Results indicate that the primary effect of D.A.R.E. is a change in commitment not to use substances. This change significantly mediates behavioral effects. However, the magnitude of D.A.R.E.'s effect on the mediator is relatively small. Other mediators that offer strong potential paths for intervention effectiveness are not affected by the program. These results suggest that in order to achieve prevention effectiveness, the curriculum used in the D.A.R.E. program needs to be replaced with one that targets and meaningfully changes appropriate mediating variables.


(from the chapter) This reprinted article originally appeared in Journal of Consulting and Clinical Psychology, 1999, Vol 67(4), 590-593. (The following abstract of the original article appeared in record 1999-03346-017.) The present study examined the impact of Project DARE (Drug Abuse Resistance Education), a widespread drug-prevention program, 10 years after administration. A total of 1,002 individuals who in 6th grade had either received DARE or a standard drug-education curriculum, were reevaluated at age 20. Few differences were found between the 2 groups in terms of actual drug use, drug attitudes, or self-esteem, and in no case did the DARE group have a more successful outcome than the comparison group. Possible reasons why DARE remains so popular, despite the lack of documented efficacy, are offered.

Evaluated the DARE Project, a school-based drug use prevention program. Ss were 5th and 6th graders from 20 schools in North Carolina. Uniformed police officers delivered 17 weekly lessons in the classroom. The schools were assigned to either a DARE or no-DARE (control) condition. Pre- and posttesting of both groups, attrition assessment, adjustments for school effects, and control for nonequivalency between comparison groups were used. DARE demonstrated no effect on Ss' use of alcohol, cigarettes, or inhalants or on their future intentions to use these substances. However, DARE made a positive impact on Ss’ awareness of the costs of using alcohol and cigarettes, perceptions of the media's portrayal of these substances, general and specific attitudes toward drugs, perceived peer attitudes toward drug use, and assertiveness.


Examined the effectiveness of the school-based drug prevention program DARE through a longitudinal randomized study of 18 pairs of elementary schools in Illinois. The DARE curriculum, which is taught by uniformed police officers, was administered to 1,584 5th and 6th graders, and its effect on students’ school performance and drug use behaviors, attitudes, and beliefs was assessed 1 yr following program exposure. DARE had no statistically significant main effects on alcohol or cigarette usage behaviors or on school performance. Out of a total of 13 measured attitudes, only perceptions of media influence regarding the portrayal of beer drinking were significantly affected. However, significant interactions between DARE and various sociodemographic factors (i.e., race/ethnicity, gender, year in school, and family metropolitan status) suggest that some program effects varied across subgroups of the target population.


This retrospective study examined the long-term effects of DARE by assessing substance use among 630 undergraduates (58.6% females, aged 18-24 yrs) attending a large public university in Ohio. Data were collected by an anonymous survey administered in a stratified random sample of undergraduate classes. The results revealed that among those respondents one to six years beyond high school, 62.5% had participated in DARE as a child or teenager, 30.6% had not participated in the program, and 6.7% were uncertain. Results from a multiple discriminant analysis found that after accounting for the effects of age, there were no substantial group differences in substance use. Participation in the DARE program during elementary school, middle school, or high school did not appear to deter subsequent use in the undergraduate years. These findings add to a growing literature that questions the efficacy of the DARE program. Discussion is directed to the possible consequences of DARE participation among those undergraduates who subsequently use tobacco, alcohol or other drugs.


Responses from 420 parents of fifth- and sixth-grade DARE students in a Midwestern county were examined to determine the parents' perceptions of the impact of DARE on their children’s and their own attitudes and behavior. Major findings indicated that most parents did not see an impact on
their child’s school performance or overall attendance. Most perceived program impact with respect to the child’s improved understanding and ability to resist drug use and improved perception of police officers. Most parents themselves reported increased awareness of substance abuse problems and increased conversation with their children about drug use as a result of DARE. Relevance of the findings to describing the perceived value and utility of DARE for parents as a stakeholder group is discussed.


Existing research confirms a need to seek strategies that combine the strengths of researchers and community to create effective prevention curricula for youth. This article describes how components of Participatory Action Research (PAR) methodology were used to create the keepin’ it REAL Drug Resistance Strategies (DRS) curriculum designed for a diverse Southwestern US youth population. School community participants were involved in multiple stages of creation and implementation. The research team developed a systematic process for creating lessons built upon strong theoretical foundations, while teachers and students contributed lesson modifications and evaluations, suggestions for supplemental activities, and the actual production of instructional videos. While the experimental design and some methodological constraints served to limit school community involvement in some phases of the DRS project, this article describes how PAR methodology ensured that researchers collaborated with school community members to create this promising drug prevention curriculum. Results of the REAL experiment, discussion of the use of this methodology, implications and recommendations for future research also are included.


Research shows that students respond more favorably to drug prevention programs when they see their culture and themselves represented in the prevention message. Because there are few effective, culturally grounded programs, new approaches are needed, particularly among Mexican American youth. This need inspired the Drug Resistance Strategies Project to develop and test the ‘keepin’ it R.E.A.L” curriculum serving ethnically diverse 7th grade students residing in a large southwestern city. This article describes development of the keepin’ it R.E.A.L curriculum, focusing on methods used to ensure cultural grounding. Six core, interrelated conceptual elements were incorporated: (1) ethnic variations in the nature of communication competence; (2) narrative based knowledge; (3) injunctive, personal, and descriptive norms as motivators in substance use; (4) social learning of social skills; (5) drug resistance strategies; and (6) grounding the program in local social contextual risk and resiliency factors. The article also reviews literature on cultural

Program Profile: Keepin’ it Real

Keepin’ it Real is a culturally grounded drug prevention curriculum for grades 6-9 that has been proven effective for reducing drug use and establishing anti-drug attitudes and beliefs. The kIR program teaches kids HOW to say "no" to alcohol, tobacco and other drugs without losing friendships. The kIR program enhances life skills such as decision-making, communication and drug-resistant strategies.

KIR is the cultural counterpart of DARE.

(http://keepinitreal.asu.edu)
approaches in prevention, presents a theoretical framework, summarizes key outcomes of the curriculum evaluation, and concludes with recommendations for the development of prevention programs for ethnically diverse youth.


This article examines the relationships among resistance skills, refusal efficacy, decision-making skills, and substance use for a sample of Mexican and Mexican American 5th grade students who were attending public schools in Phoenix, Arizona. An analysis of self-report questionnaire data indicated that the likelihood that male students reported ever having used one or more substances increased as they reported a greater willingness to use passive decision-making (e.g., going along) and decreased as they reported greater refusal efficacy and a greater willingness to utilize active decision making (e.g., thoughtful processing). No significant relationships emerged between the 4 predictors and lifetime substance use among the girls. These findings support the role of social skills in substance use prevention, shed light on an understudied group, and suggest the importance of continuing to examine gender differences in skills-based interventions.


This essay discusses the impact of the Drug Resistance Strategies Project’s keepin’ it REAL substance use prevention curriculum. The Drug Resistance Strategies Project (DRS) is an interdisciplinary collaboration that has spanned 20 years of communication research and practice. The DRS line of research impact has been felt in a number of ways, none more dramatic than the development of the keepin’ it REAL drug prevention curriculum. This curriculum is a middle school, multicultural substance use prevention program that is designated as “evidence-based” by the National Registry of Evidence-based Programs and Practices. The prevention curriculum strives to reduce adolescents’ drug use and delay the initiation of use by enhancing communication competence and refusal skills. This, of course, opens up new opportunities for research in the United States and cross-culturally, including an effectiveness study of this dissemination vehicle, with the promise of new theories and practices that advance health communication.


This pilot study examined whether refusal assertion as defined by a proven drug prevention program was associated with adolescent perceptions of effectiveness by comparing two sets of coded responses to adolescent videotaped refusal role-plays (N = 63). The original set of codes was defined by programmatic standards of refusal assertion and the second by a group of high school interns. Consistency with programming criteria was found for interns’ ratings of several indicators of verbal and non-verbal assertiveness. However, a strategy previously defined by the program as effective was perceived as ineffective by adolescents while another deemed ineffective and problematic by intervention developers was viewed as effective. Interns endorsed presenting detailed and reasonable arguments as an effective refusal strategy while short, simple statements were deemed ineffective. This study suggests the importance of including adolescent perspectives in the design, delivery, and evaluation of drug prevention strategies.
2.3. Social influence approaches


Objectives. The revised Project ALERT drug prevention program across a wide variety of Midwestern schools and communities was evaluated. Methods. Fifty-five South Dakota middle schools were randomly assigned to program or control conditions. Treatment group students received 11 lessons in 7th grade and 3 more in 8th grade. Program effects for 4276 8th-graders were assessed 18 months after baseline. Results. The revised Project ALERT curriculum curbed cigarette and marijuana use initiation, current and regular cigarette use, and alcohol misuse. Reductions ranged from 19% to 39%. Program effects were not significant for initial and current drinking or for current and regular marijuana use. Conclusions. School-based drug prevention programs can prevent occasional and more serious drug use, help low- to high-risk adolescents, and be effective in diverse school environments.


In a recent randomized field trial, Ellickson et al. found the Project ALERT drug prevention curriculum curbed alcohol misuse and tobacco and marijuana use among eighth-grade adolescents. This article reports effects among ninth-grade at-risk adolescents. Comparisons between at-risk girls in ALERT Plus schools (basic curriculum extended to ninth grade with five booster lessons) and at-risk girls in control schools showed the program curbed weekly alcohol and marijuana use, at-risk drinking, alcohol use resulting in negative consequences, and attitudinal and perceptual factors conducive to drug use. Program-induced changes in perceived social influences, one's ability to resist those influences, and beliefs about the consequences of drug use mediated the ALERT Plus effects on drug use. No significant effects emerged for at-risk boys or at-risk adolescents in schools where the basic ALERT curriculum (covering seventh and eighth grades only) was delivered. Possible reasons for gender differences and implications for prevention programming are discussed.


School-based drug prevention curricula constitute the nation’s most prevalent strategy to prevent adolescent drug use. The effects of one such curriculum, Project ALERT, was evaluated with respect to adolescent substance use. In particular, it was sought to determine if a single effect on 30-day alcohol use, noted shortly following the completion of the 2-year program, could be detected 1 year later. Delayed effects on other outcomes of interest, namely lifetime alcohol use,
and 30-day and lifetime use of cigarettes, marijuana, and inhalants were also examined. A randomized controlled trial that used school as the unit of assignment was used. Thirty-four schools with grades 6-8 from 11 states completed the study. Seventy-one Project ALERT instructors taught 11 core lessons to sixth graders and 3 booster lessons to seventh graders.

Students were assessed prior to the onset of the intervention, as sixth graders, after the completion of the 2-year curriculum, as seventh graders, and again 1 year later as eighth graders. This paper examines data from the pretest and final posttest. Using hierarchical nonlinear modeling, it was found that the earlier effect on 30-day alcohol use did not persist. Further, no effects for lifetime alcohol use and both the lifetime and 30-day use of cigarettes, marijuana, and inhalants were found. These findings do not support the long-term effectiveness of Project ALERT, when delivered to sixth graders.


The objective of this study was to evaluate the impact of a revised state-of-the-art drug prevention program, Project ALERT, on risk factors for drug use in mostly rural midwestern schools and communities. Fifty-five middle schools from South Dakota were randomly assigned to treatment or control conditions. Treatment-group students received 11 lessons in Grade 7 and 3 more in Grade 8. Effects for 4,276 eighth graders were assessed 18 months after baseline. Results indicate that Project ALERT had statistically significant effects on all the targeted risk factors associated with cigarette and marijuana use and more modest gains with the pro-alcohol risk factors. The program helped adolescents at low, moderate, and high risk for future use, with the effect sizes typically stronger for the low- and moderate-risk groups. Thus, school-based drug prevention programs can lower risk factors that correlate with drug use, help low- to high-risk adolescents, and be effective in diverse school environments.


Despite widespread prevention efforts to decrease adolescent risk-taking, substance use and driving after drinking (DD) are prevalent in the US. The current study compared the efficacy of an abbreviated version of Drug Abuse and Resistance Education (DARE-A) to a new Risk Skills Training Program (RSTP).

Adolescent participation in drinking, drug use, DD and riding with a drunk driver was examined longitudinally. After baseline assessments, adolescents were randomly assigned to the RSTP, DARE-A or a no intervention control group and then completed 2-month post-test and 6-month follow-up assessments. The sample (N=300) was comprised of 58% females and the age range was 14-19 years. The RSTP was developed to target several risk behaviors and to examine the feasibility of conducting a brief personalized prevention program in a group setting. DARE-A focused on increasing knowledge and understanding the deleterious effects of substance use. Risk-taking behavior, perception of peer risk-taking and positive and negative alcohol expectancies were assessed. RSTP participants decreased...
participation in several risk behaviors at post-test, but reductions were not maintained at 6-month follow-up.

2.4. Strengths-based approaches (11)

Positive Youth Development (PYD) approaches


The past 30 yrs have seen widespread proliferation of prevention and positive youth development (PYD) programs. More recently, the field has witnessed a greater focus on evaluation of programs emphasizing PYD, the subject of the present study. Interest in PYD has grown as a result of studies that show the same individual, family, school, and community factors often predict both positive and negative outcomes for youth. Such factors as developing strong bonds with healthy adults and maintaining regular involvement in positive activities not only create a positive developmental pathway, but can prevent the occurrence of problems. While encouraging, these findings highlight the need for systematic review across programs to further their general acceptance by the field. Thus, the goals of the present study were to research and establish both theoretical and empirical definitions of PYD and related concepts; document and describe common denominators between risk and protective factors implicated in youth problem behavior; identify and summarize the results of evaluations of PYD interventions; and identify elements contributing to both the success and lack of success in PYD programs and program evaluations, as well as potential improvements in evaluation approaches.


Children considered “at-risk” for school failure and other adverse life outcomes have received increasing attention in multiple countries across the world. The research literature is replete with studies that emphasize specific detrimental factors that may make a child’s life more difficult upon entering adulthood. The traditional, negative perspective of first identifying deficits and pathology before offering aid contrasts sharply with resiliency research and the emerging positive youth development (PYD) model. The developmental assets framework is under the rubric of PYD and offers a strength-based approach to child development, prevention and intervention. This article reviews and integrates data which demonstrate how asset-building is beneficial to students considered at-risk. School psychologists are well-positioned to collaborate with teachers and other educators to play vital roles in implementing this proactive PYD model to help all students.

This paper examines the role that community-based arts programs play in empowering marginalized youths to become agents of community change. A positive youth development perspective is used to identify the characteristics of after-school cultural arts programs that nurture core developmental assets and build strong connections between youths and their communities. Attention is given to promoting assets that strengthen the resilience of young people struggling with emotional stressors that may lead to risk-taking behavior. The Prodigy Cultural Arts Program is presented as an example of a successful after-school arts program that incorporates principles of positive youth development. Prodigy focuses on building the capacity of adolescents to become confident and competent young adults, engaged as leaders in community building. Implications for using cultural arts programs to promote developmental assets, especially among youths residing in socially and economically disadvantaged neighborhoods, are discussed.


Concern about the growth in adolescent problem behaviours (e.g. delinquency, drug use) has led to increased interest in positive youth development, and a surge in funding for ‘after school programs’. The potential of youth sport programs to foster positive development while decreasing the risk of problem behaviours is examined. Literature on the positive and negative outcomes of youth sport is presented. It is proposed that youth sport programs actively work to assure positive outcomes through developmentally appropriate designs and supportive child-adult (parent/coach) relationships. Also highlighted is the importance of sport programs built on developmental assets (Benson, 1997) and appropriate setting features (National Research Council and Institute of Medicine, 2002) in bringing about the five ‘C’s of positive development (competence, confidence, character, connections, and compassion/caring: Lerner et al., 2000). An applied sport-programming model, which highlights the important roles of policy-makers, sport organizations, coaches and parents in fostering positive youth development is presented as a starting point for further applied and theoretical research.


This study focused on strengthening the individual self-efficacy of low achieving 8th graders reducing drug-specific peer pressure through theoretical and practical training. The subject of the intervention was based on a substance-specific life skills program offering both teacher-centered and student-centered teaching approaches. A cluster analysis identified four consumption groups in the pre-test setting: (1) A “potentially curious” sample; (2) an “actually curious” sample; (3) an “experimenter” sample; and (4) a “consumer” sample. Self-efficacy was measured three times in a pre-, post-, and retention-test design. Only the “potentially curious” sub-sample showed higher resistance self-efficacy, boys and girls revealed no differences. Altogether, a short- and middle-term consistent increase was detected in both teaching methods. Consequences to increase the efficiency of drug prevention measurements are being discussed.

The present study was designed to examine the association of positive youth development with the likelihood of tobacco, alcohol, marijuana, hard drug, and sex initiation between 5th and 10th grades. A national, largely middle-class sample of 5,305 adolescents, participating in a longitudinal study funded by the National 4-H Council (although not all participants were enrolled in 4-H or other after-school programs), completed measures of positive youth development (PYD) constructs and of tobacco, alcohol, marijuana, and hard drug use once per year between 5th and 10th grades. At the 9th and 10th grade assessments, adolescents were asked whether they had initiated sexual intercourse and, if so, at what age they had first engaged in intercourse. Although the present sample was somewhat lower risk compared to national averages, survival analysis models indicated that PYD was significantly and negatively associated with the initiation hazards for tobacco use, marijuana use, and sex initiation for girls only, and with hard drug use for both genders. PYD was also positively associated with the odds of condom use across genders. Results are discussed with regard to PYD as a preventive process.


Purpose: Positive youth development (PYD) emphasizes a strengths-based approach to the promotion of positive outcomes for adolescents. After-school programs provide a unique opportunity to implement PYD approaches and to address adolescent risk factors for negative outcomes, such as unsupervised out-of-school time. This study examines the effectiveness of an after-school program delivered in urban settings on the prevention of adolescent substance use.

Methods: A total of 304 adolescents participated in the study: 149 in the intervention group and 155 in a control group. A comprehensive PYD intervention that included delivery of an 18-session curriculum previously found to be effective in preventing substance use in school settings was adapted for use in urban after-school settings. The intervention emphasizes adolescents’ use of effective decision-making skills to prevent drug use. Assessments of substance use attitudes and behaviors were conducted at program entry, program completion, and at the 1-year follow-up to program entry. Propensity scores were computed and entered in the analyses to control for any pretest differences between intervention and control groups. Hierarchical linear modeling (HLM) analyses were conducted to assess program effectiveness. Results: The results demonstrate that adolescents receiving the intervention were significantly more likely to view drugs as harmful at program exit, and exhibited significantly lower increases in alcohol, marijuana, other drug use, and any drug use 1 year after beginning the program. Conclusions: A PYD intervention developed for use in an urban after-school setting is effective in preventing adolescent substance use.


Comments on an article by Tebes et al. (see record 2007-12692-005). The Tebes et al. article in the current issue provides a quasi-experimental evaluation of an afterschool program designed to promote youth development and prevent adolescent substance abuse among adolescents participating in an afterschool program. Both the research on afterschool settings and in positive youth development (PYD) are relatively new areas of exploration. These efforts can help us to
better understand how youth can be encouraged to not only avoid problem behavior but also to grow up to be helpful, involved citizens in communities.

Social-Emotional Learning (SEL) approaches


**Program Profile: 4Rs Program**

The 4Rs Program is a universal, school-based intervention for Grades K–5 focused on social–emotional learning and literacy development. The 4Rs Program focuses on changing underlying mental and interpersonal processes that lead to aggression and violence when they are still in the formative stage. (Jones et al., 2010)

Objective: To report experimental impacts of a universal, integrated school-based intervention in social-emotional learning and literacy development on change over 1 school year in 3rd-grade children’s social-emotional, behavioral, and academic outcomes. Method: This study employed a school-randomized, experimental design and included 942 3rd-grade children (49% boys; 45.6% Hispanic/Latino, 41.1% Black/African American, 4.7% non-Hispanic White, and 8.6% other racial/ethnic groups, including Asian, Pacific Islander, Native American) in 18 New York City public elementary schools. Data on children's social-cognitive processes (e.g., hostile attribution biases), behavioral symptomatology (e.g., conduct problems), and literacy skills and academic achievement (e.g., reading achievement) were collected in the fall and spring of 1 school year. Results: There were main effects of the 4Rs Program after 1 year on only 2 of the 13 outcomes examined. These include children's self-reports of hostile attributional biases (Cohen's $d = 0.20$) and depression ($d = 0.24$). As expected based on program and developmental theory, there were impacts of the intervention for those children identified by teachers at baseline with the highest levels of aggression ($d = 0.32$-$0.59$) on 4 other outcomes: children's self-reports of aggressive fantasies, teacher reports of academic skills, reading achievement scaled scores, and children's attendance. Conclusions: This report of effects of the 4Rs intervention on individual children across domains of functioning after 1 school year represents an important first step in establishing a better understanding of what is achievable by a schoolwide intervention such as the 4Rs in its earliest stages of unfolding. The first-year impacts, combined with the knowledge of sustained and expanded effects after a second year, provide evidence that this intervention may be initiating positive developmental cascades both in the general population of students and among those at highest behavioral risk.
PATHS (Promoting Alternative Thinking Strategies) is a comprehensive, developmentally-based curriculum for teachers to use in their classrooms with latency-aged children throughout the elementary school years. Some of the major goals of PATHS include teaching emotional literacy, improving social competence, alleviating and preventing emotional distress and behavior problems, reducing risk factors, improving classroom atmosphere, enhancing student-teacher relationships, and promoting optimal development. The present paper provides an overview of the content and process of PATHS, discusses PATHS as psychoanalytic prevention, and summarizes research conducted with PATHS over the past 15 years.


This article describes the results of three pilot studies that were conducted to evaluate the recently developed Strong Kids and Strong Teens social-emotional learning programs in increasing students’ knowledge of healthy social-emotional behavior and decreasing their symptoms of negative affect and emotional distress. The first study included 120 middle school students (in grade 5) from a general education student population. The second study included 65 general education students in grades 7-8. The third study included 14 high school students (grades 9-12) from a regional special education high school, who were identified as having emotional disturbance. The three groups participated in either the Strong Kids (groups 1 and 2) or Strong Teens (group 3) programs, receiving
one-hour lessons and associated assignments once a week for 12 weeks. Social-emotional knowledge and negative emotional symptoms of participants were assessed using brief self-report measures, in pretest-posttest intervention designs. All three studies showed that, following participation in the respective programs, students evidenced statistically significant and clinically meaningful changes in desired directions on the target variables. Implications for future research are discussed, as is the importance of social and emotional learning as a prevention and intervention strategy to promote mental health among students in schools.

2.5. School-based prevention programs (20)

Curriculum-based school programs


Aim: There is increasing concern regarding the use of cannabis among adolescents, especially given recent evidence highlighting its link with later mental disorders. Encouraging young people with mental health or drug issues to seek professional help is an important early intervention strategy; however, adolescents are typically reluctant to do so and instead turn to their peers for help. Peers may not have the skills or knowledge required to assist their friends to access professional help. This paper describes the development and evaluation of MAKINGtheLINK, a school-based health promotion programme that promotes help-seeking behaviour for mental health and cannabis use issues among young people. Methods: The MAKINGtheLINK programme was piloted with 182 Year 10 students at a secondary school in Melbourne, Australia. Forty teachers received the MAKINGtheLINK staff professional development session. Results: The delivery of the MAKINGtheLINK programme was found to be both acceptable and feasible within a school setting. Students and teachers described it as a fun, engaging, helpful and important programme. Students reported increased confidence and awareness of how to seek help for themselves or a friend, and teachers indicated increased confidence and awareness of how to assist students to seek help for cannabis use and/or mental health problems. Conclusions: MAKINGtheLINK was successfully implemented within the school curriculum. This appears to be the first school-based programme that specifically focuses on facilitating professional help-seeking for cannabis use and mental health problems among young people, and demonstrates that utilizing peer models for help-seeking is a valuable resource for early intervention initiatives.
Youth Substance Use Prevention

Program Profile: Life Skills Training Program

The Life Skills Training (LST) program is an effective primary prevention program for adolescent drug abuse that addresses the risk and protective factors associated with drug use initiation and teaches skills related to social resistance and enhancing social and personal competence. LST emphasizes drug resistance skills training within the context of a generic personal and social skills training model.


Alcohol, tobacco, and other drug use are important problems that typically begin during adolescence. Fortunately, substantial progress has been made in developing effective drug abuse prevention programs for youth over the past two decades. The Life Skills Training (LST) program is an effective primary prevention program for adolescent drug abuse that addresses the risk and protective factors associated with drug use initiation and teaches skills related to social resistance and enhancing social and personal competence. This paper provides an overview of the theoretical underpinnings of the LST program, along with a description of the program’s core components, materials, and methods. Findings from over two decades of evaluation research are reviewed, including results from a series of small scale efficacy studies and large scale effectiveness trials with a variety of adolescent populations. These studies have demonstrated positive behavioral effects of LST on smoking, alcohol, marijuana use as well as the use of multiple substances and illicit drugs, with prevention effects lasting up until the end of high school. Further research is needed to understand the mediating mechanisms through which prevention programs such as LST are effective, and ways to widely disseminate research-based programs into schools.


National survey data indicate that illicit drug use has steadily increased among American adolescents since 1992. This upward trend underscores the need for identifying effective prevention approaches capable of reducing the use of both licit and illicit drugs. The present study examined long-term follow-up data from a large-scale randomized prevention trial to determine the extent to which participation in a cognitive-behavioral skills-training prevention program led to less illicit drug use than for untreated controls. Data were collected by mail from 447 individuals (mean age 18 yrs) who were contacted after the end of the 12th grade, 6.5 years after the initial pretest. Results indicated that students who received the prevention program (Life Skills Training) during junior high school reported less use of illicit drugs than controls. These results also support the hypothesis that illicit drug use can be prevented by targeting the use of gateway drugs such as tobacco and alcohol.


Substance use and abuse are important public health problems in the USA and throughout the world. In many developed countries, the initial stages of substance use typically include experimentation with alcohol, tobacco, or marijuana with one’s peer group during adolescence. While there have been gradual decreases in the use of these substances in recent years among youth in the USA and other countries, increases have been observed in the use and misuse of...
other substances, such as the misuse of prescription drugs and over-the-counter cough medications in the USA. From a developmental perspective, data shows that rates of alcohol, tobacco, marijuana, and other illicit drug use typically escalate during adolescence and peak during young adulthood, corresponding with the increased freedom and independence of this time of life. Substance use decreases for most young people as they take on adult responsibilities, although a proportion will continue or increase their use and develop substance use problems. Given what is known about the onset and progression of substance use, implementing preventive interventions during early adolescence is critical. Most drug prevention or education programmes take place in school settings. A variety of theory-based school-based drug prevention programmes have been developed and tested. The most effective programmes are delivered interactively and teach skills to help young people refuse drug offers, resist pro-drug influences, correct misperceptions that drug use is normative, and enhance social and personal competence skills. A key challenge is to identify mechanisms for the wide dissemination of evidence-based drug preventive interventions and ways to train providers to implement programmes effectively and thoroughly.


Widespread implementation of effective programs is unlikely to affect the incidence of violent crime unless there is careful attention given to the quality of implementation, including identification of the problems associated with the process of implementation and strategies for overcoming these obstacles. Here the results of a process evaluation focused on discovering common implementation obstacles faced by schools implementing the Life Skills Training (LST) drug prevention program are described. The evaluation was conducted by the Center for the Study and Prevention of Violence (CSPV) under the Blueprints for Violence Prevention Initiative in conjunction with the designer of the LST program, Dr. Gilbert Botvin and his dissemination agency, National Health Promotion Associates (NHPA), and was funded by the Office of Juvenile Justice and Delinquency Prevention (OJJDP).


This work presents the results obtained on applying a drug-abuse prevention programme, an adaptation of Botvin’s “Life skills training” programme. The initial sample comprised 1029 adolescents from five secondary schools in the city of Santiago de Compostela (NW Spain), distributed in three experimental conditions, two treatment, in which the programme was applied by teachers or by members of the research team, and a control condition. The article presents the results on the use of different drugs over four years of follow-up. The results obtained show how for the treatment condition lower levels of tobacco and alcohol consumption are found after a year of follow-up. In later evaluations these effects fade, but important differences emerge in the use of other drugs, such as cannabis, tranquilizers or amphetamines.

Changes requiring greater accountability among federal agencies in the US have led to an increased emphasis on what are called "science-based" or "research-based" interventions in recent years. The most widely advocated of these prevention interventions is the Life Skills Training (LST) program, the effectiveness of which, its supporters argue, has been demonstrated using rigorous research methods. The research study that has attracted most attention is the randomized trial conducted with white middle-class adolescents in New York State, as this purports to demonstrate that the LST program can reduce alcohol and illicit drug use 6 yrs after initial implementation. In contrast to the advocates for the LST program, I argue that this longitudinal trial does not meet the rigorous methodological standards claimed on its behalf. Indeed, it violates one of the fundamental principles of a randomized trial by restricting key analyses to selective subsamples of the experimental group. I estimate that about 7.5% of those who initially received the LST intervention in the trial were included in the most recent set of analyses reported. This falls considerably short of the proportion of intervention group participants required at follow-up in a methodologically sound controlled trial.


This paper documents the development and first year evaluation of the TimeWise: Learning Lifelong Leisure Skills curriculum, which aims to increase positive free time use, and mitigate or prevent the initiation of substance use and abuse. The sample was comprised of 634 school youth attending nine middle schools in a rural area in eastern United States. Results from self-report data indicate that students who received the TimeWise curriculum reported being less amotivated and more motivated by identified and introjected forms of motivation. Students in TimeWise reported being better able to restructure boring situations into something more interesting; having higher levels of decision making skills, initiative, community awareness; and participating in new interests, sports, and nature-based activities.


The Wise Mind pilot study compared the efficacy of an environmental Alcohol/Tobacco/Drug (ATD) prevention program with an obesity prevention program of Healthy Eating and Exercise (HEE) as an active control group for modifying expectancies related to alcohol and tobacco use in children. Four Catholic schools (N = 670 students) were randomly assigned to the treatment conditions (2 schools in each condition). Children were followed over two academic years. At an 18-month assessment, the ATD program resulted in healthier alcohol and tobacco expectancies as compared
to the HEE program. Children in the ATD program did not differ from those in the HEE program in alcohol, tobacco, or drug use prevalence. However, prevalence rates of use were very low across all schools. Findings can benefit future prevention efforts with young children and suggest that strategies for preventing continued smoking in this age group are needed.


Purpose - The purpose of this paper is to describe the topics covered by coaches assisting teachers implementing a research-based drug prevention program and explore how coaching affects student outcomes.

Design/methodology/approach - The All Stars drug prevention curriculum is implemented by 16 urban teachers who received four coaching sessions. Two coaches participated. Coaches are interviewed by investigators to assess topics covered. Students completed pre-test-post-test measures of mediators and substance use behaviours. Findings - The average teacher is coached on 11.7 different topics, out of a total of 23 topics. Coaching topics most heavily emphasized include: introduction and wrap up; time management; general classroom management; teacher’s movement around the class; asking open-ended questions; using students’ questions, comments and examples to make desired points; general preparation; engaging high-risk youth; reading from the curriculum; implementing activities correctly; focusing on objectives and goals; maintaining a focus on the task; and improving depth of understanding. Seven coaching topics are found to relate to changes in student mediators and behaviour. Research limitations/implications - The current study is exploratory. Future research should explore how teachers develop the particular skills required by prevention programs and how coaches can assist them. Practical implications - Five levels of skill development are postulated, which coaches may address: fundamental teaching skills, mechanics of program delivery, development of an interactive teaching style, effective response to student input, and effective tailoring and adaptation. Originality/value - The paper is one of a very few studies that explores how coaching impacts outcomes in substance abuse prevention.

Program Profile: Wise Mind

The “Wise Mind” concept represents the idea that with knowledge and environmental changes, students could make “wise” decisions about substance use/abuse. The environmental changes were construed as large-scale modifications that altered the ecology of the school environments, including policy, personal, social, cultural, and physical environmental changes. There was also a family empowerment component.

(Copeland et al., 2009)

Program Profile: All Stars

All Stars seeks to keep youths from experimenting with and regularly using or abusing alcohol, tobacco, marijuana, and other substances. All Stars shapes normative beliefs by correcting students’ perceptions of what their group thinks is normal or acceptable. Through programmed activities and discussion, participants see that the majority of the people in their peer group actually act in conventional ways and believe in conventional standards for behavior.

(Harrington et al., 2000)

All Stars was designed with the intent of being data-driven. The specific data which have driven the development of this program are summarized in other chapters in this book, including the chapter by Donaldson, Hansen & Graham (1999), Fearnow-Kenney, Hansen, and McNeal (1999) and the chapter by Ennett (1999). The program has several goals. First, All Stars seeks to keep youths from experimenting with and regularly using or abusing alcohol, tobacco, marijuana, and other substances. The program also attempts to keep adolescents from becoming sexually active. The final behavioral goal of the program is to keep youths from becoming violent and destructive.


Thirty-four schools (n=7426 consented sixth graders, 71% of the eligible population) were randomized to conditions to test the hypothesis that “Skills for Adolescence” (SFA) is more effective than standard care in deterring and delaying substance use through middle school. Females comprised 52% of the sample with a mean age of 11 yrs at baseline. One-year posttest data were collected from 6239 seventh graders (84% of those eligible). Initiation of “ever” and “recent” use of five substances for baseline nonusers and changes in recent use for baseline users by experimental condition were compared using mixed model regression to control for school clustering. For pretest nonusers, recent cigarette smoking was lower for SFA than controls (P<.05), as was lifetime marijuana use (P<.06). There were also three Treatment x Ethnicity interactions around drinking behaviors. Hispanics in SFA were less likely to ever and recently drink, and to recently binge drink than Hispanic controls; there were no treatment differences among non-Hispanics. For baseline users, there were three significant SFA delays in transition to experimental or recent use of more “advanced” substances: drinking to smoking, drinking to marijuana use, and binge drinking to marijuana.


Background: An estimated 13 million youths aged 12 to 17 become involved with alcohol, tobacco and other drugs annually. The number of 12- to 17-year olds abusing controlled prescription drugs increased an alarming 212 percent between 1992 and 2003. For many youths, substance abuse precedes academic and health problems including lower grades, higher truancy, drop out decisions, delayed or damaged physical, cognitive, and emotional development, or a variety of
other costly consequences. For thirty years the Narconon program has worked with schools and community groups providing single educational modules aimed at supplementing existing classroom-based prevention activities. In 2004, Narconon International developed a multimodule, universal prevention curriculum for high school ages based on drug abuse etiology, program quality management data, prevention theory and best practices. The curriculum was reviewed and its rationale in order to test its ability to change drug use behavior, perceptions of risk/ benefits, and general knowledge. Methods: After informed parental consent, approximately 1000 Oklahoma and Hawai‘i high school students completed a modified Center for Substance Abuse Prevention (CSAP) Participant Outcome Measures for Discretionary Programs survey at three testing points: baseline, one month later, and six month follow-up. Schools assigned to experimental conditions scheduled the Narconon curriculum between the baseline and one-month follow-up test; schools in control conditions received drug education after the six-month follow-up. Student responses were analyzed controlling for baseline differences using analysis of covariance. Results: At six month follow-up, youths who received the Narconon drug education curriculum showed reduced drug use compared with controls across all drug categories tested. The strongest effects were seen in all tobacco products and cigarette frequency followed by marijuana. There were also significant reductions measured for alcohol and amphetamines. The program also produced changes in knowledge, attitudes and perception of risk. Conclusion: The eight-module Narconon curriculum has thorough grounding in substance abuse etiology and prevention theory. Incorporating several historically successful prevention strategies this curriculum reduced drug use among youths.


Evaluations of school-based substance abuse prevention programs with schools or school districts randomly assigned to either the treatment or control condition have demonstrated effective strategies over the past 30 years. Although control schools were never considered “pure” (i.e., no other interventions were being offered), school-based programming in the 1980s did not include evidence-based interventions. Since the late 1990s, funding agencies have required schools either to select programming from approved lists of prevention strategies or to demonstrate the

Program Profile: Narconon

The eight module Narconon drug education curriculum for high school ages incorporates a unique combination of prevention strategies with content addressing tobacco, alcohol, marijuana and common "hard drugs." Health motivation, social skills, social influence recognition and knowledge-developing activities address a number of risk and protective factors in the etiology of substance abuse and addiction.

(Lennox & Cecchini, 2008)

Program Profile: Take Charge of Your Life

Take Charge of Your Life specifically targets normative beliefs regarding the perceived prevalence of substance use among teens, consequences of substance use, and strengthening life skills including decision-making, communications, and refusal skills. The curriculum is based on a model of prevention that suggests that challenging existing beliefs through the use of objective data (e.g., survey data from MTF) leads students to an adjustment in their perceptions of the rates of peer use and in the level of acceptance of substance use by those who are important to them.

(Sloboda et al., 2008)
efficacy of the strategies that would be used. This has increased the number of schools delivering evidence-based programs to their students. As a result, "treatment as usual" is more challenging to researchers. This paper describes exposure to prevention programming as reported by 204 school administrators from 83 districts and their 19,200 students who are participating in the Adolescent Substance Abuse Prevention Study, a national randomized evaluation trial of the program, Take Charge of Your Life. In order to determine the extent of student exposure to prevention programming in both the control and treatment schools, data were collected in each of the 5 years of the study from two sources: principals and prevention coordinators and from students. The data provided by the principals and prevention coordinators indicate that the vast majority of schools assigned to the control condition offered students drug prevention programming. This finding has implications for the evaluation of Take Charge of Your Life but also for other evaluation studies. The students were asked questions regarding participation in drug education posed on annual surveys. When their responses were compared to the reports from their school principals and prevention coordinators, it was found that the students underreported exposure to drug education. A follow-up qualitative study of a sample of students suggests the need for rewording of the questions for students in future studies. The implications of these findings for evaluation studies are discussed.


This article describes the implementation of an innovative curriculum called Drugs-At-Work (DAW), which was evaluated in three phases. In phase-one, data collected after the third year of the study suggested that the curriculum had a significant impact on the fifth-grade participants, who in turn influenced their sixth-grade classmates the following year. In comparison to their sixth-grade baseline counterparts, the DAW participants and their classmates were significantly less likely to have used tobacco, alcohol or other illicit drugs (ATOD) and less likely to know other elementary students who did so. In phase-two, data were examined on a year-by-year basis using a modified A-B-A design. These data revealed a drop from baseline in ATOD use during the intervention years and a return-to-baseline after the program ended. In phase-three, comparisons were made among participants in the Combined Baseline Group, the Combined DAW Group and the Transition Group (those exposed to DAW but not surveyed until a year after the grant closed). These analyses revealed that the DAW significantly reduced ATOD use for the total sample and for the Mexican-American, the Anglo, and the African-American students examined separately.

**Program Profile: Drugs-At-Work**

The Drugs-At-Work (DAW) curriculum combines components of school-based drug prevention and ethics-education programs. Instead of stressing the harmful health consequences of abusing ATOD, the DAW emphasizes the indirect detrimental impact that drug-related problems have on non-users. Second, instead DAW attempts to directly change the social norms by portraying substance abuse as a shared problem that hurts families, hurts businesses, and damages our country’s economy. DAW spends more time trying to reduce peer pressure than it does on coaching youth to resist peer pressure.

(Wright, 2007)
Alternative school-based programs


The current study reports findings from a pilot evaluation of a voluntary alcohol and marijuana intervention for young teens. Students at 2 middle schools completed 4 surveys over 2 years. During Year 2, an intervention, Project CHOICE (PC), was implemented at 1 school and was voluntarily attended by 13% of adolescents. Participants ranged from 10 to 15 years of age and were approximately 45% male, 45% White, 30% Latino, and 15% of mixed ethnic origin. Outcomes included assessments of self use and perceptions of friends' and schoolmates' past-month use of alcohol and marijuana. Analyses that compared PC participants (n=64) with a matched control sample of students (n=264) revealed that PC participants reported lower rates of alcohol use and lower perceptions of friends' marijuana use and of schoolmates' use of these substances. Random-effects growth models indicated that self use and perceptions of friends' use of alcohol and marijuana increased more sharply among control school students (n=178) relative to students from the PC school (n=270), regardless of participation. Results suggest that a brief voluntary intervention attended by a small proportion of students can impact both individual and schoolwide substance-related outcomes.


Schools are often seen as a key setting for health education and health promotion. Theatre in education offers a valuable way of tackling difficult subjects within schools, particularly for those children open to risk and lifestyle choices. This paper reports on a play about drugs, written and acted by a local theatre in education group in south Wales. The play was written for 10-12 year olds and has been performed, with revisions, over the last ten years in local schools. This paper reports on a simple evaluation of the effects of the play on the understanding of, and feelings about, drugs in the target group exposed to the play. A total of 133 children responded to the survey and were generally positive about the play, identified with the main characters and could remember some of the illicit drugs mentioned in the drama. Six teachers were also questioned and they were positive about the play's contribution to the curriculum and its approach to drug education.

This paper presents the qualitative process findings from an evaluation of a school-based performing arts programme, ‘Rock Challenge’. Rock Challenge aims to promote healthy life styles ‘by building resilience amongst young people involved’. The research aimed to capture the experiences and perceptions of young people’s involvement in the programme, particularly in relation to the concept of the ‘drug-free high’, support offered throughout the programme and participants’ response to Rock Challenge as a drug-prevention initiative. Findings from the study suggest young people felt very positive about their involvement and, in particular, valued the skills and experiences associated with organising a performance, team-working, developing confidence, friendship, fun and excitement. The excitement felt during dance rehearsals and the live performance was associated with the concept of a ‘drug-free high’, feeling good in the absence of drugs and alcohol, and was seen as a key benefit of the programme. While support from teachers and families was perceived as high, difficulties were identified in the recruitment of males and students vulnerable to substance misuse and recommendations are made for improvement. The health promotion opportunities for school nurses and other public health practitioners and personal, social and health education co-ordinators are highlighted.


Over the past few years photovoice has been gaining popularity in health education. There is a growing body of literature around this technique. The photovoice process entails use of photographic images taken by people who are usually disadvantaged and may have less money, less power, or lower status. Photovoice has been used in the context of alcohol and drug education. Photovoice as a technique for use in alcohol and drug education offers several advantages and has some disadvantages. The first advantage of this technique is that it is an excellent means to initiate dialogue in a community setting. It is especially useful for those people who do not have a say in matters of importance since it gives them a way to express themselves. To conclude, it can be said that photo voice is an emerging technique in the repertoire of alcohol and drug educators. It

**Program Profile: Rock Challenge**

Rock Challenge aims to promote healthy life styles ‘by building resilience amongst young people involved’. Findings from the study suggest young people felt very positive about their involvement and, in particular, valued the skills and experiences associated with organising a performance, team-working, developing confidence, friendship, fun and excitement. Difficulties were identified in the recruitment of males and students vulnerable to substance misuse.

(Salmon et al., 2005)

**Program Profile: Photovoice**

The photovoice process entails use of photographic images taken by people who are usually disadvantaged and may have less money, less power, or lower status. Photovoice has been used in the context of alcohol and drug education. An advantage of this technique is that it is an excellent means to initiate dialogue in a community setting. It is especially useful for those people who do not have a say in matters of importance since it gives them a way to express themselves.

(Sharma, 2010)
Youth Substance Use Prevention

The Adolescent Social Action Program (ASAP) describes a pedagogical approach to behaviour change. Freire’s model uses a discussion-based, peer-centred approach of 1) problematizing the issue (e.g., drug use), 2) conscientization, 3) praxis, 4) transformation, and 5) critical consciousness. (Sharma, 2001)

2.6. Family-centred programs


The purpose of the present study was to conduct a test of acceptability of a new model for family-focused drug prevention programs for families of early adolescents. An existing evidence-based behavioral intervention, the Strengthening Families Program: For Parents and Youth 10-14 (SFP), was adapted to include concepts and activities related to mindfulness and mindful parenting (an extension of mindfulness to the interpersonal domain of parent-child relationships). The foundation for this innovative intervention approach stems from research on the effects of mind-body treatments involving mindfulness meditation and the function of stress and coping in relation to parenting and parent well-being. One group of families participated in a seven-week pilot of this mindfulness-enhanced version of SFP. Results of a mixed-method implementation evaluation suggest that the new intervention activities were generally feasible to deliver, acceptable to participants, and perceived to yield positive benefits for family functioning and parent

Program Profile: ASAP

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Program Profile: Strengthening Families Program (Mindfulness-adaptation)

“Mindful parenting” is conceptualized as a higher-order construct that encompasses parent caring and compassion (beyond the simple expression of affection), parent social cognitions and awareness of and reactions to parenting-related emotions. Bringing nonjudgmental acceptance to parenting may encourage a healthy balance between child-oriented, parent-oriented, and relationship-oriented goals, and a reduction in self-directed concerns on the part of the parent. (Duncan et al., 2009)
psychological well-being. The next phase of this research will involve curriculum refinement based upon results of this initial study, and a larger pilot efficacy trial will be conducted.


This article describes the results of a demonstration project which focused on exploring recruitment and retention of ethnic minority families to a parent training program aimed to prevent substance abuse among their children. The Parenting for Drug-Free Children project sought to deliver a curriculum to parents from several ethnic groups in an urban setting. The targeted ethnic communities were African American, Latino, Native American, and Samoan. The project successfully recruited diverse groups of families to participate in a drug prevention program, many of whom had never participated before in a parenting program. The identification of key individuals for recruiting and accessing networks of potential participants proved to be an effective means of recruitment.


Like their urban counterparts, adolescents from rural areas are at risk for health and behavior problems, including alcohol and other drug use. This study tested the effects on parenting practices of specific sessions of a parent-training intervention. Preparing for the Drug Free Years, designed to prevent adolescent substance abuse and other problem behaviors. 209 rural families were randomly assigned to an intervention or a wait-list control condition. Post-test scores revealed that parents (mean age 38.9 yrs for mothers and 41.0 yrs for fathers) in the intervention condition reported significant improvements in parenting behaviors targeted by specific intervention sessions when compared with controls. Effects were most pronounced among mothers. No significant effects were found for nontargeted parenting behaviors, and targeted behaviors were most improved among parents attending relevant program sessions. These results strengthen the internal validity of the study and increase the plausibility that reported improvements were due to the intervention.
Youth Substance Use Prevention

Program Profile: Strengthening Families Program

The ISFP is based upon the Biopsychosocial Model. The long-range goal of ISFP is to reduce youth substance use and other problem behaviors. Intermediate goals include the enhancement of parental skills in nurturing, limit-setting, and communication, as well as youth prosocial and peer resistance skills. The ISFP requires seven sets of sessions conducted once per week for 7 consecutive weeks and held on weekday evenings in participating schools.

(Spoth et al., 2008)

Theoretical and empirical evidence suggests that participants in drug use prevention programs can help one another learn the necessary skills to develop protective factors against drug use. This article focuses on Shulman’s (1992) dynamics of mutual aid as they apply to group members in Preparing for the Drug Free Years (PDFY), a drug prevention program designed for parents and their adolescent children. The article demonstrates how specific dynamics of mutual aid can serve as sources of encouragement to prevent drug use, as a mechanism for discovery of new skills and protection against drug use, and as a path to the awareness that parents and children can work together to prevent drug use. Recommendations for group facilitators are discussed.


In this article, the authors examine whether delayed substance initiation during adolescence, achieved through universal family-focused interventions conducted in middle school, can reduce problematic substance use during young adulthood. Sixth-grade students enrolled in 33 rural midwestern schools and their families were randomly assigned to 3 experimental conditions. Self-report questionnaires provided data at 7 time points for the Iowa Strengthening Families Program (ISFP), Preparing for the Drug Free Years (PDFY), and control groups through young adulthood. Five young adult substance frequency measures (drunkenness, alcohol-related problems, cigarettes, illicit drugs, and polysubstance use) were modeled as distal outcomes affected by the average level and rate of increase in substance initiation across the adolescent years in latent growth curve analyses. Results show that the models fit the data and that they were robust across outcomes and interventions, with more robust effects found for ISFP. The addition of direct intervention effects on young adult outcomes was not supported, suggesting long-term effects were primarily indirect. Relative reduction rates were calculated to quantify intervention-control differences on the estimated proportion of young adults indicating problematic substance use; they ranged from 19% to 31% for ISFP and from 9% to 16% for PDFY.


This study examined the long-term substance use outcomes of 2 brief interventions designed for general population families of young adolescents. Thirty-three public schools were randomly assigned to 3 conditions: the 5-session Preparing for the Drug Free Years Program, the 7-session Iowa Strengthening Families Program, and a minimal contact control condition. The pretest
involved 667 6th graders and their families. Assessments included multiple measures of initiation and current use of alcohol, tobacco, and marijuana. Pretest data were collected in the 6th grade and the reported follow-up data were collected in the 10th grade. Significant intervention-control differences in initiation and current use were found for both interventions. It is concluded that brief family skills-training interventions designed for general populations have the potential to reduce adolescent substance use and thus have important public health implications.


An expanding body of research suggests an important role for parent or family competency training in children's social-emotional learning and related school success. This article summarizes a test of a longitudinal model examining partnership-based family competency training effects on academic success in a general population. Specifically, it examines indirect effects of the Iowa Strengthening Families Program (ISFP) on school engagement in 8th grade and academic success in the 12th grade, through direct ISFP effects on intervention-targeted outcomes--parenting competencies and student substance-related risk--in 6th grade. Twenty-two rural schools were randomly assigned to either ISFP or a minimal-contact control group; data were collected from 445 families. Following examination of the equivalence of the measurement model across group and time, a structural equation modeling approach was used to test the hypothesized model and corresponding hypothesized structural paths. Significant effects of the ISFP were found on proximal intervention outcomes, intermediate school engagement, and the academic success of high school seniors.


This study examined the narratives of 75 parent-offspring pairs who were asked to relate their shared drug prevention conversations. A descriptive model of parent-offspring drug talks (PODT) was developed to address the form, content, and function of parent-offspring discourse about drugs and drug use. Additionally, two temporal approaches to socializing conservative drug use norms were identified--targeted socialization and integrated socialization. Over two-thirds of the respondents reported integrating ongoing socialization efforts into the fabric of their everyday lives in contrast to more targeted one-shot 'drug talks.'


This study evaluated effects of the Iowa Strengthening Families Program, a family-focused universal preventive intervention, on growth patterns of adolescent internalizing (anxiety and depressive symptoms) and monthly polysubstance use (alcohol, tobacco, marijuana, inhalants, and other illicit drugs), as well as the association between internalizing and polysubstance growth factors. The sample consisted of rural Midwestern adolescents (N = 383), followed from sixth through twelfth grade. Compared to the control group, the intervention group adolescents showed a slower rate of increase in internalizing symptoms and polysubstance use. Intervention effects on internalizing symptoms were similar for boys and girls; however, girls demonstrated a higher overall level and a greater rate of increase across time. The intervention slowed the rate of increase in polysubstance use significantly more for girls than for boys, although overall levels of use were lower in the intervention group for both genders. Associations between internalizing and
polysubstance use growth factors were found for girls, but not for boys, suggesting gender differences in psychosocial development.

2.7. Family, school, community partnerships (12)


This article describes an innovative drug prevention pilot in which developing a substance abuse video served as a vehicle for teaching youth healthy attitudes and behaviors. Seven 10- to 12-year-old African Americans from a public housing development participated in 10 weekly sessions focusing on video skills and substance abuse. Based on the principles of capacity building and cognitive dissonance theory, the children learned about substance abuse in their community and movie-making, which they used to create an antidrug video. Six activities were identified as critical to the program’s success: family involvement, community engagement, adapting drug education content to fit community characteristics, using the camcorder as a central vehicle for learning, community field assignments, and evaluation-based learning.


To reduce problems associated with youth substance use, Indiana developed funding streams and infrastructure to facilitate coordination of statewide prevention efforts. These prevention efforts aimed at youth include programming in the non-school hours. To examine the relationship between these efforts and youth substance abuse, students indicating participation in one or more prevention activities were compared to non-participant students. Results revealed that participating middle school students were less likely to have reported use of tobacco than their non-participating peers. Also, participation in prevention activities in the non-school hours was related to a lower likelihood of alcohol use among high school students.


Blueprint is a universal multi-component prevention programme involving young people aged 11 to 13. In 2005 Blueprint completed delivery of drug prevention through work
Program Profile: YARP

Youth Action Research for Prevention (YARP), a federally funded research and demonstration intervention, utilizes youth empowerment as the cornerstone of a multilevel intervention designed to reduce and/or delay onset of drug and sex risk, while increasing individual and collective efficacy and educational expectations. The intervention, located in Hartford Connecticut, served 114 African-Caribbean and Latino high school youth in a community education setting and a matched comparison group of 202 youth from 2001 to 2004. The strategy used in YARP begins with individuals, forges group identity and cohesion, trains youth as a group to use research to understand their community better (formative community ethnography), and then engages them in using the research for social action at multiple levels in community settings (policy, school-based, parental etc.) Engagement in community activism has, in turn, an effect on individual and collective efficacy and individual behavioral change. This approach is unique insofar as it differs from multilevel interventions that create approaches to attack multiple levels simultaneously. The YARP intervention is described and qualitative and quantitative data from the quasi-experimental evaluation study design is employed to assess the way in which the YARP approach empowered individual youth and groups


There is a heavy burden placed on drug education in the public mind, it sometimes appears to be a cure-all; inoculating young people against the very real dangers of drugs, illicit or otherwise. Research shows that certain models of drug education can achieve modest reductions in the consumption of cannabis, alcohol and tobacco, and delay the onset of their use. There are also indications that drug education has a role in reducing the risks associated with drug use, reducing the amount of drugs used and helping people to stop. The positive interaction between universal drug education and broader preventative services that are focused on these risk and protective factors will make a difference to the lives of children and young people. This is something that the Blueprint programme, a universal multi-component prevention programme involving young people aged 11 to 13, which in 2005 completed delivery of drug prevention through work with schools, parents and the media in communities in England, has recognized and tries to address.


Youth Action Research for Prevention (YARP), a federally funded research and demonstration intervention, utilizes youth empowerment as the cornerstone of a multilevel intervention designed to reduce and/or delay onset of drug and sex risk, while increasing individual and collective efficacy and educational expectations. The intervention, located in Hartford Connecticut, served 114 African-Caribbean and Latino high school youth in a community education setting and a matched comparison group of 202 youth from 2001 to 2004. The strategy used in YARP begins with individuals, forges group identity and cohesion, trains youth as a group to use research to understand their community better (formative community ethnography), and then engages them in using the research for social action at multiple levels in community settings (policy, school-based, parental etc.) Engagement in community activism has, in turn, an effect on individual and collective efficacy and individual behavioral change. This approach is unique insofar as it differs from multilevel interventions that create approaches to attack multiple levels simultaneously. The YARP intervention is described and qualitative and quantitative data from the quasi-experimental evaluation study design is employed to assess the way in which the YARP approach empowered individual youth and groups.

with schools, parents and the media in communities in England, reinforced by increased action to restrict the availability of tobacco, alcohol and volatile substances to under-age youth. The programme evaluation includes process, impact, outcome and cost measures. This article describes the formative research and process of planning that formed the development of the Blueprint programme and the evidence base underpinning the approach. The process has established for the first time the systematic integration of research with the framework of the national school curriculum and Drug Strategy delivery partnerships. The completed evaluation in 2007 will be a major opportunity to reassess the role of drug education and prevention in meeting educational needs and as part of national drug and alcohol strategies.
of youth (youth networks) to engage in social action in their schools, communities and at the policy level, which in turn affected their attitudes and behaviors.


Program evaluation data from school and community applications of a physical fitness drug prevention program is presented. A train-the-trainer methodology was applied to install the program in 22 settings within the state of Illinois. The physical training program consisted of exercise and educational modules delivered over a twelve-week time period that focused on learning values and life skills through exercise. Complete pre-post data were obtained on 329 participating youth at six school and community based sites. Significant increases were demonstrated in physical activity and self-report data indicated significant decreases in risk factors such as low self-concept, poor school attendance, anxiety, depression, and number of friends who use alcohol and drugs. There were significant reductions in the percentage of youth who used cigarettes, smokeless tobacco, and alcohol. It was concluded that a strong relationship was demonstrated for increased fitness leading to lowered risk factors and usage patterns. Likewise, the train-the-trainer model was shown to be an effective installation approach to expand fitness programming within prevention settings.


Substance use outcomes were examined for 351 youth participating in a randomized controlled trial designed to assess the efficacy of a school-based multimodal universal preventive intervention, Linking the Interests of Families and Teachers (LIFT). Frequency of any use of tobacco, alcohol, and other drugs was assessed via self-report from grades 5 through 12. Latent variable growth models specified average level, linear growth and accelerated growth. The LIFT intervention had a significant effect on reducing the rate of growth in use of tobacco and illicit drugs, particularly for girls, and had an overall impact on average levels of use of tobacco, alcohol, and illicit drugs. Average tobacco use reductions were mediated by increases in family problem solving. The intervention had significant indirect effects on growth in substance use through intervention effects on reduced playground aggression and increased family problem solving. The intervention was also associated with roughly a 10% reduced risk in initiating tobacco and alcohol use. Implications for future studies of multimodal preventive interventions are discussed.
"Xperience" is an innovative alcohol and drug prevention program that has adopted a multilevel, community-based strategy to promote drug-and-alcohol free social activities, venues and norms among urban youth ages 14-20. The intervention aims to strengthen protective factors and reduce risk factors for alcohol and other substance use among high school age youth by addressing multiple factors at the individual, peer, community and city level. The purpose of this paper is to discuss the process of building the different levels of this intervention during the 3-year formative phase. The following are explained: (1) The choice of a multilevel and participatory strategy, (2) Formative research leading to the intervention model, (3) The theoretical framework underlying the methodology, (4) Pilot intervention development (Years One and Two), (5) Current program methods and outcome goals, and lastly, (6) Some of the lessons learned, goals achieved, and plans for the future. This descriptive account of building a multilevel intervention aims to serve as a useful guide for others wishing to develop similar approaches, and for theorizing about some of the common challenges involved in this process.


In this randomized prevention trial, it was sought to quantify the potential early impact of two developmentally inspired universal preventive interventions on the risk of early-onset alcohol, inhalant, tobacco, and illegal drug use through early adolescence. Participants were recruited as they entered first grade within nine schools of an urban public school system. Approximately, 80% of the sample was followed from first to eighth grades. Two theory-based preventive interventions, (1) a family-school partnership (FSP) intervention and (2) a classroom-centered (CC) intervention, were developed to improve early risk behaviors in primary school. Generalized estimating equations (GEE) multivariate response profile regressions were used to estimate the relative profiles of drug involvement for intervention youths versus controls, i.e. youth in the standard educational setting. Intervention status was not associated with risk of starting alcohol, inhalants, or marijuana use, but assignment to the CC intervention was associated with reduced risk of starting to use other illegal drugs by early adolescence, i.e. heroin, crack, and cocaine powder. This study adds new evidence on intervention-associated reduced risk of starting illegal drug use.
This analysis examined the possible synergistic effect of exposure to the National Youth Anti-Drug Media Campaign and a classroom-based drug prevention curriculum among 9th grade students participating in a randomized trial of ALERT Plus. A total of 45 South Dakota high schools and their middle-school feeder(s) were randomly assigned to an ALERT condition (basic prevention curriculum delivered in 7th and 8th grades), an ALERT Plus condition (basic curriculum with booster lessons added for 9th and 10th grades), or a control condition. Marijuana use in the past month was significantly less likely among ALERT Plus students reporting at least weekly exposure to anti-drug media messages. The National Youth Anti-Drug Media Campaign may have led to reductions in marijuana use among youth who simultaneously received school-based drug prevention.


This study tests the impact of an in-school mediated communication campaign based on social marketing principles, in combination with a participatory, community-based media effort, on marijuana, alcohol and tobacco uptake among middle-school students. Eight media treatment and eight control communities throughout the US were randomly assigned to condition. Within both media treatment and media control communities, one school received a research-based prevention curriculum and one school did not, resulting in a crossed, split-plot design. Four waves of longitudinal data were collected over 2 years in each school and were analyzed using generalized linear mixed models to account for clustering effects. Youth in intervention communities (N = 4216) showed fewer users at final post-test for marijuana (odds ratio (OR) = 0.50, P = 0.019), alcohol (OR = 0.40, P = 0.009) and cigarettes (OR = 0.49, P = 0.039), one-tailed. Growth trajectory results were significant for marijuana (P = 0.040), marginal for alcohol (P = 0.051) and non-significant for cigarettes (P = 0.114). Results suggest that an appropriately designed in-school and community-based media effort can reduce youth substance uptake. Effectiveness does not depend on the presence of an in-school prevention curriculum.


Illicit drug use by adolescents in the UK is of major concern. Recent surveys suggest that increasing proportions of young people are using drugs, that the number of different drugs used has increased, and that young people are experimenting at a younger age (C. Roberts et al, 1995). As part of its response to these problems, the UK government established the Home Office Drugs Prevention Initiative, a nationwide programme of interventions combining central guidance and local initiatives, and designed to establish best practice in the field (Home Office, 1996). 'NE Choices' was

Program Profile: NE Choices

'NE Choices' is a 3-yr multi-component social influences intervention targeting 16 yr old school children. NE Choices is underpinned by social marketing theory and practice. Social marketing is founded on exchange theory which argues that, given behavioural options, people will ascribe values to the alternatives and select the one that offers greatest benefit – or enhancement - to themselves.

(Stead et al., 2001)
one of the largest interventions in the programme, a 3-yr multicomponent social influences intervention targeting -16 yr old school children in the north-east of England. Following a 3-yr development and pilot phase, the intervention began its full implementation in January 1997 and ran until April 1999. A longitudinal quasi-experimental study measured drug use behaviour before, during and after the programme, while process and impact evaluation studies examined delivery and immediate response. This paper describes the development, design, and delivery of the programme’s first year, the ‘Year Nine intervention’.

2.8. Multimedia and internet-based programs


Using a grant from the National Institute on Drug Abuse, The Missouri Institute of Mental Health produced a series of media tools designed to teach fourth-, fifth-, and sixth-grade children from African-American churches about the science of drug addiction. Beginning with a core curriculum, two separate interventions were created. In the SpaceScouts version of the program, the content is embedded within a narrative storyline delivered via an interactive DVD. In the LockerTalk version of the program, content is delivered in a more didactic form via an interactive CD-ROM. Youths from a dozen churches were randomly assigned to one of these two conditions or to a wait-list control. A pretest, posttest, and four- and eight-month follow-up evaluations were conducted. An additional sample of youths went through the programs during a summer camp. Analyses of the programs revealed that students who received these interventions demonstrated some modest gains in knowledge. Specifically, students who viewed SpaceScouts demonstrated improvements from baseline on one of the three sub-modules at post-test. Students who viewed LockerTalk, however, showed greater overall mastery of the content as compared to the students who viewed SpaceScouts or were in the wait-list control condition.

Program Profile: SpaceScouts vs. LockerTalk

This study compared an identical curriculum delivered two different ways:

- SpaceScouts embedded substance abuse content within a narrative story about space alien teenagers. This was a video that resembled many teen-targeted television shows.

- LockerTalk used a much more straightforward didactic approach as opposed to a story. Each of the three lessons took on a similar form, patterned on the theme of a basketball team’s locker room.

(Program Profile: The Doubles)

The Doubles is a seven-episode series of media tools designed to teach third and fourth-grade students about the science of drug addiction. The program’s curriculum is delivered through a set of DVDs, interactive CD-ROMs, workbooks, or an Internet Site. Each delivery format features a fictional up-and-coming teen pop band called “The Doubles,” which is made up of a set of identical twins and a set of fraternal twins.

(Program Profile: The Doubles)

( Epstein, 2004)
Program Profile: Say No with Donny

Say No with Donny" is a multi-media computer program that uses an older brother model who provides information and advice to youthful Israeli players regarding the adverse consequences of using drugs. The program targets primary drug prevention efforts on a high-risk preadolescent population of 6th graders in a poor community. (Gropper, 2002)

Program Profile: Mother-Daughter Communication Program

Guided by family interaction theory, the intervention program aimed to reduce girls' substance use through mother–daughter interactions. The program helped mothers learn to better communicate with their daughters, monitor their daughters' behavior and activities, build their daughters' self-image and self-esteem, establish rules about and consequences for substance use, create family rituals, and refrain from communicating unrealistic expectations. Working together in their homes and at times convenient to them, mother–daughter dyads interacted with the computer program's nine sessions. (Schinke et al, 2009)


This study tested a computerized gender-specific, parent-involvement intervention program grounded in family interaction theory and aimed at preventing substance use among adolescent girls. Following program delivery and 1 year later, girls randomly assigned to the intervention arm improved more than girls in a control arm on variables associated with reduced risks for substance use, including


Describes an integrated 10-session educational multi-media program to teach groups of Israeli youth to avoid drugs, called "Say No with Donny". The program uses an older brother model who provides information and advice to youthful Israeli players regarding the adverse consequences of using drugs. The program targets primary drug prevention efforts on a high-risk preadolescent population of 6th graders in a poor community. Originally designed for use in a social work agency computer lab, the program is now being given at schools in their own computer classrooms. Issues discussed include the role of the facilitator/group leader, interaction of the software and group process, group work activities used with the program, community support, theoretical underpinnings, and program effectiveness. It is concluded that this integration of group work methods and the computer program represents a new development in social work practice in the area of health promotion and prevention with youth.


"The Doubles," funded by the National Institute on Drug Abuse, is a seven-episode series of media tools designed to teach third and fourth-grade students about the science of drug addiction. The program's curriculum was delivered through a set of DVDs, interactive CD-ROMs, workbooks, or an Internet Site. Results indicate that although the interventions were successful in teaching students about the biological bases of substance abuse, they had little effect on student attitudes. Implications for future studies are discussed.

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communication with their mothers, knowledge of family rules about substance use, awareness of parental monitoring of their discretionary time, non-acceptance of peer substance use, problem-solving skills, and ability to refuse peer pressure to use substances. Relative to control-arm girls, those in the intervention arm also reported less 30-day use of alcohol and marijuana and lower intentions to smoke, drink, and take illicit drugs in the future. Girls' mothers in the intervention arm reported greater improvements after the program and relative to control-arm mothers in their communication with their daughters, establishment of family rules about substance use, and monitoring of their daughters' discretionary time. Study findings lend support to the potential of gender-specific, parent-involvement, and computerized approaches to preventing substance use among adolescent girls.


This study developed and tested an Internet-based gender-specific drug abuse prevention program for adolescent girls. A sample of seventh, eighth, and ninth grade girls (N = 236) from 42 states and 4 Canadian provinces were randomly assigned to an intervention or control group. All girls completed an online pretest battery. Following pretest, intervention girls interacted with a 12-session, Internet-based gender-specific drug prevention program. Girls in both groups completed the measurement battery at posttest and 6-month follow-up. Analysis of posttest scores revealed no differences between groups for 30-day reports of alcohol, marijuana, poly drug use, or total substance use (alcohol and drugs). At 6-month follow-up, between-group effects were found on measures of 30-day alcohol use, marijuana use, poly drug use, and total substance use. Relative to girls in the control group, girls exposed to the Internet-based intervention reported lower rates of use for these substances. Moreover, girls receiving the intervention achieved gains over girls in the control group on normative beliefs and self-efficacy at posttest and 6-month follow-up, respectively.


Adolescent substance abuse is a significant public health problem in the United States. Physical consequences of adolescent drug use include short and long-term negative
effects on the brain and body, including disease, impaired judgment, addiction, and even death. In particular, increasing knowledge about the negative effects of drugs may effectively delay the onset of use and prevent negative consequences of use among youth. Despite the benefits of school-based prevention, the amount of this instruction that children receive declined significantly in recent years. The scientific concepts related to drug use, including information on brain function and neurotransmission and how drugs change these processes, are complex. The curriculum was predicated on the Theory of Reasoned Action (TRA), which posits that exposure to new persuasive information causes progressive changes in knowledge, attitudes, and ultimately behavior. The data reveal several key findings about the impact of the multimedia curriculum on knowledge and attitudes in the target population. Overall, the results suggest that the multimedia curriculum under evaluation is relatively effective at increasing knowledge about alcohol and drugs of abuse. The results of the evaluation point to the need for research on other innovative approaches that decrease barriers to delivery of critical health information to students in the current educational climate.


The purpose of the present study was to examine the efficacy of a substance abuse-preventive intervention using CD-ROM technology among adolescents in the sixth and seventh grades (12- to 13-years-old). The CD-ROM program used interactive audio and video content to teach social resistance skills, general personal and social competence skills, and normative education. Rates of substance-use behavior, attitudes, knowledge, normative expectations, and related variables were examined. From approximately 23 schools, students (n = 123) were randomly assigned to either receive the CD-ROM preventive intervention (n = 61) or to serve as a control group (n = 62). Study participants were 50% male, predominantly white (75%), and 94% came from two-parent families. Self-report data were collected using a self-administered web-based survey. Findings indicated that there were significant intervention effects on pro-drug attitudes, normative expectations for peer and adult substance use, anxiety reduction skills, and relaxation skills knowledge, with intervention students reporting improved scores on these outcomes at the posttest relative to control students. Findings indicate that a substance abuse-preventive intervention derived from an effective, school-based prevention approach is efficacious when delivered using CD-ROM technology. Research is needed to determine potential differences in the efficacy of CD-ROM prevention tools delivered in schools compared to home settings.
2.9. Peer-led education programs


Objective: This study examined the effectiveness of three peer-facilitated brief alcohol interventions--small group motivational interviewing, motivationally enhanced peer theater, and an interactive alcohol-education program--with students engaging in high-risk drinking who were referred for alcohol policy violations. Method: Undergraduate students referred for alcohol policy violations ($N = 695$) at a large northeastern public university were randomized to one of the three conditions. Six-month follow-up data were collected on drinking frequency and quantity, negative consequences, use of protective behaviors, and perceptions of peers' drinking norms. Results: There were no statistically significant overall pre-post effects or treatment effects. However, exploratory analyses indicated that decreases in perceived norms and increases in use of protective behavioral strategies were associated with reductions in alcohol use and alcohol-related problems at follow-up ($p < .01$). Conclusions: The presence of nonsignificant pre-post or main effects is, in part, consistent with recent research indicating that sanctioned college students may immediately reduce drinking in response to citation and that brief interventions may not contribute to additional behavioral change. The presence of statistically significant correlations between alcohol use and related problems with corrections in norms misperceptions and increased use of protective behaviors at the individual level holds promise for both research and practice. The integration of elements addressing social norms and use of protective behaviors within brief cognitive-behavioral intervention protocols delivered by trained peer facilitators warrants further study using randomized clinical trials.


Several studies have suggested that peer-led drug prevention programs are more effective than adult-led programs, but the evidence is not conclusive. In this article the results are presented of a meta-analysis of studies that compare drug prevention programs led by peers to the same programs led by adults. Twelve studies were identified in a systematic literature search. The quality of these studies was not optimal, and the interventions and target groups differed considerably among studies. Overall, peer-led programs were found to be somewhat more effective than adult-led programs (standardized difference $d$: 0.24). Large differences between studies were found, with some studies indicating greater effects for peer-led programs and other studies showing greater effects for adult-led programs. It is concluded that the effectiveness of a prevention program is determined by several characteristics of the programs. The leader may constitute one of those characteristics.


Aim of this study was to evaluate a standard ten-minute peer education protocol to reduce binge drinking among Dutch adolescents at campsites during summer holidays. Using a quasi-
experimental design, the effects of the peer education protocol as applied by trained peer educators were evaluated. Data was collected by telephone interviews fourteen days after the holiday. Peer education significantly increased knowledge on the risks of alcohol abuse and promoted personal reflection on alcohol intake. After peer education, adolescents had a more realistic view of their alcohol intake, more frequently perceived alcohol intake of their friends as binge drinking, and reported a higher intention to drink less alcohol in the future. Contrary to expectations, adolescents reported less self-efficacy to reduce alcohol use after peer education.


Examined the effectiveness of a newsletter written by teenagers on sexual and health issues in changing knowledge and attitudes regarding sexual activity, condom use, and drug use. 419 high school students (aged 13-18 yrs) completed a pretest, were given a copy of an 8 page newsletter on sexual and health issues to read as homework, and then completed a posttest during the next class period. Findings indicate that reading the newsletter led to more positive attitudes toward postponing sexual involvement and more negative attitudes toward using drugs. The newsletter was particularly effective in changing the knowledge and attitudes of Black students. Discussion focuses on the implications of these findings for school-based sexuality education.

### 2.10. Mentoring programs


Presents results of a 3-yr evaluation of Across Ages, an intergenerational approach to drug and alcohol prevention. The program consists of 3 elements: (1) a mentoring program in which youths are matched with older adults who provide ongoing support and encouragement in weekly interactions; (2) community service activities designed to promote involvement with and better understanding of the frail elderly; and (3) a school-based life skills curriculum. Approximately 400 6th grade students took part in the evaluation over a 3 yr period. Students’ classes were randomly assigned to 1 of 3 experimental conditions: the mentor condition, the curriculum condition, and the control condition. Youths involved in the study completed questionnaires on 3 occasions: prior to the initiation of program activities, at the conclusion of the program, and again 6 mo following the cessation of program activities. Results indicate that mentoring is associated with lower levels of problem behavior and substance use and higher levels of self-confidence, self-control, cooperation, and attachment to both the school and the family. Students receiving mentoring report lower levels of alcohol use. In

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² This article not included on disk.
The Peer Group Connection program is a school-year-long, weekly, peer-lead, activity-based curriculum with modules designed to focus on addressing issues important to students transitioning into high school. The peer leaders were upperclassmen chosen based on various leadership qualities and to mirror the freshmen’s ethnicities. The weekly topics included: team building, stress and anger management, risk assessment, conflicts in relationships, normative beliefs about drug and alcohol use, refusal skills, decision making, and communication skills.

(Johnson et al., 2008)
The core services of the Urban Youth Connection Program consist of individual, pair or group counseling provided to students attending a middle school and a high school. Students entered the program initially through referral from teachers, based upon a risk profile. Counseling services were provided by graduate student interns enrolled in a local university. (Valentine et al., 1998)

Unplugged consisted of a 12-session standardised curriculum based on a comprehensive social influence model. The programme was taught using interactive techniques and focused on developing and enhancing interpersonal skills (group dynamics, assertiveness, problem-solving, creative thinking and self-control) and intrapersonal skills (verbal and non-verbal communication, expression of negative feelings, coping skills). Sessions on normative education and information on the effects of smoking and drug use were also provided. (Vigna-Taglianti et al., 2009)
comprehensive social influence model. The analytical sample consisted of 6,359 students (3,324 boys and 3,035 girls). The use of cigarettes, alcohol and illicit drugs, adolescents' knowledge and opinions about substances, as well as social and personal skills were investigated through a self completed anonymous questionnaire administered at enrolment and 3 months after the end of the programme. Adjusted Prevalence Odds Ratios were calculated as the measure of association between the intervention and behavioral outcomes using multilevel regression modeling. Results: At enrolment, boys were more likely than girls to have used cannabis and illicit drugs, whereas girls had a higher prevalence of cigarette smoking. At the follow-up survey, a significant association between the programme and a lower prevalence of all behavioral outcomes was found among boys, but not among girls. Age and self esteem emerged as possible modifiers of these gender differences, but effects were not statistically significant. Conclusions: Comprehensive social influence school curricula against substance misuse in adolescence may perform differently among girls and boys, owing to developmental and personality factors.

2.11. Mass media campaigns (12)


Given the uncertain effects of antidrug media campaigns, and the ease of finding online illegal drug information, research is needed on the Internet role in disseminating drug information to youths. This exploratory study analyzes National Survey of Parents and Youth (NSPY) data on drug website viewing among 12-18 year olds (N = 7,145). Approximately 10.4% reported drug-related website exposure: 5.4% viewed only websites that communicated how to avoid drugs or bad things about drugs (antidrug websites); 1.7% only viewed websites that communicated how to use drugs and good things about drugs (prodrug websites); and 3.2% viewed both types of websites. The low rates of viewing antidrug websites occurred despite efforts in the National Youth Antidrug Media Campaign (NYAMC) to encourage youths to visit such websites. Prodrug website viewers had used inhalants and been offered marijuana, perceived little risk in trying marijuana, intended to use marijuana, had close friends who used drugs, reported low parental monitoring, and had been exposed to antidrug media messages. Viewing antidrug websites was related to gender, income, likelihood of using marijuana in the next 12 months, having close friends who use drugs and talking to friends about avoiding drugs, parental monitoring, and drug prevention exposure. Prior prevention exposure increased drug website viewing overall, perhaps by increasing general curiosity about drugs. Because adolescents increasingly seek health information online, research is needed on how they use the Internet as a drug information source, the temporal relationships of prevention exposure and drug website viewing, and the effects of viewing prodrug websites on drug risk.


Examined whether recall of anti-drug advertising was associated with a decreased probability of using illicit drugs and, given drug use, a reduced volume of use, in 4,195 adolescents (aged 13-17 yrs). A behavioral economic model of influences on drug consumption was developed with survey
data from the adolescents to determine the incremental impact of anti-drug advertising. The findings provided evidence that recall of anti-drug advertising was associated with a lower probability of marijuana and cocaine/crack use. Recall of such advertising was not associated with the decision of how much marijuana or cocaine/crack to use. The results suggest that individuals predisposed to try marijuana are also predisposed to try cocaine/crack. It is concluded that the findings provide support for the effectiveness of anti-drug advertising programs.


Personal Influence (Katz and Lazarsfeld 1955/2006) put forward and tested a variety of hypotheses about how social contexts constrain media effects. Five such hypotheses are described: three about interactions of media exposure with social context (Stability, Conformity, and Instrumental) and two about two-step flow effects (Relay and Message Interpretation). Each is tested here with data from the evaluation of the National Youth Anti-Drug Media Campaign. The evaluation of the campaign has suggested boomerang outcomes—more exposure to the campaign led to more interest in marijuana use. This article examined whether those effects were magnified through interactions with siblings. In general, no evidence showed that older siblings’ beliefs or behavior interacted with younger siblings’ exposure to campaign messages in producing effects. However, evidence showed that the two-step flow did operate: older siblings were themselves affected by their own exposure to the campaign and, in turn, affected the beliefs and behaviors of their younger brothers and sisters.


Objectives: The cognitive and behavioral effects of the National Youth Anti-Drug Media Campaign on youths aged 12.5 to 18 years and report core evaluation results were examined. Methods: From September 1999 to June 2004, 3 nationally representative cohorts of US youths aged 9 to 18 years were surveyed at home 4 times. Sample size ranged from 8117 in the first to 5126 in the fourth round (65% first-round response rate, with 86%-93% of still eligible youths interviewed subsequently). Main outcomes were self-reported lifetime, past-year, and past-30-day marijuana use and related cognitions. Results: Most analyses showed no effects from the campaign. At one round, however, more ad exposure predicted less intention to avoid marijuana use (\(\gamma = -0.07\); 95% confidence interval [CI] = -0.13, -0.01) and weaker anti drug social norms (\(\gamma = -0.05\); 95% CI = -0.08, -0.02) at the subsequent round. Exposure at round 3 predicted marijuana initiation at round 4 (\(\gamma = 0.11\); 95% CI = 0.00, 0.22). Conclusions: Through June 2004, the campaign is unlikely to have had favorable effects on youths and may have had delayed unfavorable effects. The evaluation challenges the usefulness of the campaign.


Evaluated a range of drug information leaflets from both an adolescent and professional perspective. 72 adolescents aged 13, 15, and 17 yrs) were interviewed in focus groups within school settings. Fifteen pediatricians were also interviewed individually. Participants were asked to consider the leaflets under the following categories: initial impact, content and overall suitability for adolescents. Pediatricians were not good judges of which leaflets would appeal to adolescents. They tended to choose the leaflets with comic strip illustrations and those written in a "cool" or witty
style. In contrast the adolescents seemed to prefer a more sober approach with high quality factual information combined with clear illustrations.


Reviews four websites: DrugScope (http://www.drugscope.org.uk); National Institute on Drug Abuse (http://www.nida.nih.gov/NIDAHome.html); Wired (http://www.substancemisuse.net); and HabitSmart (http://www.habitsmart.com). These are just four sites which deal with the issues of substance abuse sensibly and calmly. Anyone who searches for this sort of information--children doing a project, concerned parents, adolescents wanting to know what it is they were offered--will all benefit from finding drug information which is reliable, and factual and which will give then a clear idea of the risks, problems and possible consequences without becoming sensationalist.


This study investigated an Australian antidrug campaign that targeted adolescents directly and indirectly via recruiting parents into drug prevention. Eighty-six parent-child dyads completed surveys measuring campaign evaluations, discussions about drugs, and beliefs about risks to self (own child) and to the average young Australian. Adolescents were optimistic about risks, and media impact was evident only in perceptions of risk to others. Parents were less optimistic, and perceptions of campaign quality predicted perceived risk to own child and discussion about drugs. However, this was moderated by negative affect associated with the campaign. There was some evidence that discussions influenced adolescents' perceptions of personal risk. This demonstrates the importance of individual responses and communication processes in determining the impact of persuasive media messages.


Aims: A campaign to prevent initiation into drug injecting among street youth who have never injected drugs (NIDUs) was carried out in Montreal, Canada in 2005. Evaluation objectives were (1) to assess the campaign's ability to reach NIDU street youth and (2) to understand the campaign's effects on this population. Methods: A survey was conducted, as well as semi-structured interviews. Findings: The campaign enjoyed a high degree of visibility. It spoke to young NIDUs, causing them to reflect on both drug injecting and their own non-injection drug use. The campaign had a positive impact in terms of their views on drug injecting. Despite its limited scope, young NIDUs also considered the campaign to be a tool with the potential to contribute to preventing initiation into drug injecting among their peers. Conclusions: Media prevention campaigns are able to reach hidden populations through the use of bold and innovative techniques. Such campaigns can also contribute to influencing the attitudes and perceptions of these populations. However, more comprehensive injection prevention programs need to be established.


In this study, it was examined whether awareness (recall) of the National Youth Anti-Drug Media Campaign (NYADMC) benefited youth by attenuating their drug use. Data were obtained from the National Survey of Parents and Youth (NSPY), an evaluative survey tool designed to monitor
campaign progress over 4 years. A growth modeling strategy was used to examine whether change in message recall or campaign brand awareness was related to declining patterns of drug use. Two distinct growth trajectories were modeled to account for growth among younger (12 to 14) versus older (15 to 18) youth. Growth trajectories indicated steady and positive increases in alcohol, cigarette, and marijuana use over time. During the early portion of adolescence, youth reported more “brand” awareness, remembered more of the video clips depicting campaign messages, recalled more media stories about youth and drugs and more anti-tobacco ads, and reported more radio listening and less television watching. When they were older, these same youth reported declines in these same awareness categories except for specifically recalling campaign ads and radio listening. Models positing simultaneous growth in drug use and campaign awareness indicated mixed findings for the campaign. Overall early levels of campaign awareness had a limited influence on rates of growth, and in a few cases higher levels were associated with quicker acquisition of drug use behaviors. When they were younger, these youth accelerated their drug use and reported increasing amounts of campaign awareness. When they were older, increasing awareness was associated with declines in binge drinking and cigarette smoking. No effects for marijuana were significant but trended in the direction of increased awareness associated with declining drug use. The findings are discussed in terms of how they depart from previous reports of campaign efficacy and the potential efficacy of social marketing campaigns to reach a large and impressionable youthful audience with strategically placed advertisements.


Examines longitudinal evidence for the impact of exposure to an in-school media campaign on adolescent substance use attitudes and behaviors, using data from 4 middle schools in 2 school districts. 665 6th- and 7th-graders participated. Amount of exposure to the campaign directly impacted perceptions that marijuana use was inconsistent with personal aspirations and intentions to use marijuana and appeared to reduce maturational decay in those attitudes. Path analyses suggested effects on behavior change, consistent with the theory of reasoned action, were via effects on intention and exposure effects on intention were via effects on aspirations. Reverse causation was tested and rejected, as were possible moderation models that might also qualify exposure effects. Analyses of a foil recognition measure using a treatment and control population suggested that response set artifacts were nominal in size and that response bias was slight and could be statistically controlled.


Objectives: To examine strategies for using the mass media effectively in drug prevention campaigns targeting high sensation seekers. Methods: Both experimental lab and field studies were used to develop a comprehensive audience segmentation strategy targeting high sensation seekers. Results: A 4-pronged

Program Profile: SENTAR

SENTAR (SENsation-seeking TARgeting) is a theoretically based and empirically tested mass media targeting strategy for reaching high sensation seekers with advertisements that appeal to their need for stimulation. Advertisements 1) employ sensation-seeking as a major targeting variable, 2) design prevention messages high in sensation value 3) employ precampaign research with members of the target audience, and 4) place prevention messages in contexts sensation-seekers are likely to be attending (e.g., certain TV shows). (Stephenson, 2003)
targeting strategy employed in an anti-marijuana media campaign yielded significant drops in 30-day marijuana use by adolescents. Other research demonstrates how high and low sensation seekers process antidrug ads differently. Conclusions: Mass mediated antidrug campaigns aimed at high sensation seekers are effective tools for drug prevention.


This research employed the theory of reasoned action to investigate the role of authoritative parenting in 3 drug-prevention behaviors: (a) parental monitoring, (b) parent-child discussions, and (c) awareness of the child's environment. A phone survey of 158 parents of adolescents in 7th, 9th, and 11th grades revealed that authoritative parenting was correlated with parenting practices that reduce the likelihood of adolescent drug use, including discussing family rules about drugs, discussing strategies to avoid drugs, discussing those in trouble with drugs, parental monitoring, knowing the child's plans for the coming day, and personally knowing the child's friends well. Additionally, authoritative parenting moderated the attitude-behavioral intention relation for parental monitoring and awareness of the child's environment, with the weakest relation detected for low-authoritative parents. The utility of these findings in helping design and target antidrug messages for parents more effectively is discussed.

### 2.12. Targeted approaches

**Aboriginal youth** (5)


Examines comparative material from Native Americans and Australian Aborigines on the uses of culture as a form of healing and traces the rationale for the argument that cultural wholeness can serve as a preventive or curing agent in drug and alcohol abuse. There are certain dilemmas confronting native treatment directors attempting these syncretic approaches. Additionally, North American Indians have at their disposal a rich heritage of communal healing techniques; some (such as the sweat lodge) have been adapted and incorporated into the treatment both of solvent abuse by adolescents and alcohol abuse by adults. In Australia, on the other hand, traditional healing techniques have been less amenable to adaptation. On neither continent are indigenous people attempting to adapt recent mainstream models of intervention to suit their needs.

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3 Please note this section only covers existing programs for targeted populations. More information on why these groups have been targeted for prevention can be found in Part III.

Examined 78 Canadian Aboriginal youths (aged 7-19 yrs) who received treatment for inhalant abuse in a program established by the federal government. Data were based on a secondary analysis of case files and follow-up information from community workers. Results show 74% of the Ss tracked during follow-up relapsed after discharge from treatment. Many of the Ss came from backgrounds marked by isolation, poverty, family violence, and substance abuse. The average age the Ss started using solvents was 9.72 yrs. Gasoline was the most common inhalant used. Inhalant use was often accompanied by alcohol and drug abuse. A logistic regression model predicting who would relapse indicated that youths who abused inhalants immediately before admission, those who were described as unmotivated in treatment, and those who were hospitalized during treatment had the greatest risk of relapsing during follow-up.


Examined the development and implementation of the Seven Circles community substance abuse prevention coalition in Southeast Alaska, which incorporated a youth-adult partnership approach to accomplish its activities. Four annual partnership member surveys were conducted to assess the local projects, assess the value of the partnerships to the participants, and gather feedback about the functioning of the Seven Circles Coalition. Respondents included 22 youths and 36 adults for the 1997-2000 surveys. The results are described as supporting the youth/adult model and are discussed in the context of youth empowerment.


This article describes some of the risks and challenges faced by Aboriginal youth living in Canadian cities. It evaluates four current drug prevention/education programs for this group and other at-risk youth. The lessons learned from these strategies lead to a proposal for a reflective education approach directed toward opening meaningful dialogue about drugs and alcohol with urban Aboriginal youths in group settings. The objectives of the approach are to create an open dialogue with youths, enhance problem-solving skills, minimize harm, and initiate a

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**Program Profile: Seven Circles Coalition**

The Seven Circles Coalition is a Native-administered network. The goals of the network are to foster and change social attitudes and community perceptions and policies regarding alcohol, tobacco, and other drug (ATOD) use, and to support healthier lives for youth and their families by determining the effectiveness of local community ATOD prevention partnerships and utilizing that information to ensure program effectiveness and ultimately long-term sustainability.

(Einspruch & Wunrow, 2002)

**Program Profile: UNYA**

The model developed by UNYA (Urban Native Youth Association) is a powerful strategy for meeting the needs of urban Aboriginal youth. Values of autonomy, self-determination, and community wellness are recognized through offering a range of services for youth at various stages of change. Specifying a clear target audience, working with the whole family, addressing interrelated health issues, connecting youths with positive role-models, and integrating talking circles and ceremonies with sports activities are all highly effective approaches that have produced positive results among the children and adolescents.

(Ghelani, 2011)
process of reflection about the role of drugs in the lives of young people. The goal is for the proposed approach to be implemented in various group contexts, including classrooms, workshops, talking circles, treatment centers and sports clubs. The article also explores the practice and policy dimensions of prevention-focused social work with Aboriginal youth.


This study tests for the efficacy of a school-based drug prevention curriculum (Think Smart) that was designed to reduce use of Harmful Legal Products (HLPs, such as inhalants and over-the-counter drugs), alcohol, tobacco, and other drugs among fifth- and sixth-grade students in frontier Alaska. The curriculum consisted of 12 core sessions and 3 booster sessions administered 2 to 3 months later, and was an adaptation of the Schinke life skills training curriculum for Native Americans. Fourteen communities, which represented a mixture of Caucasian and Alaska Native populations in various regions of the state, were randomly assigned to intervention or control conditions. Single items measuring 30-day substance use and multi-item scales measuring the mediators under study were taken from prior studies. Scales for the mediators demonstrated satisfactory construct validity and internal reliability. A pre-intervention survey was administered in classrooms in each school in the fall semester of the fifth and sixth grades prior to implementing the Think Smart curriculum, and again in the spring semester immediately following the booster session. A follow-up survey was administered 6 months later in the fall semester of the sixth and seventh grades. A multi-level analysis found that the Think Smart curriculum produced a decrease (medium size effect) in the proportion of students who used HLPs over a 30-day period at the 6 month follow-up assessment. There were no effects on other drug use. Further, the direct effect of HLPs use was not mediated by the measured risk and protective factors that have been promoted in the prevention field. Alternative explanations and implications of these results are discussed.


This study examined how strength of ethnic identity, multiethnic identity, and other indicators of biculturalism relate to the drug use norms of urban American Indian middle school students. The article distinguishes categories of norms that may affect drug use. Regression analysis of self-reports by 434 American Indian seventh graders (aged 11-15 yrs) attending middle schools in a large southwestern US city indicates that students who had a more intense sense of ethnic pride adhered more strongly to certain antidrug norms than those who did not. Whereas American Indian students with better grades in school held consistently stronger antidrug norms, there were few differences by gender, socioeconomic status, or age. These results have implications in social work practice for better understanding and strengthening the protective aspects of American Indian culture in drug prevention efforts.
Asian community (1)


Recent approaches to drug prevention have turned to focus on comprehensive strategies that target early risk factors and that strengthen protective factors in adolescence. Objective: To develop a drug prevention program that is evidence-based and conceptually sound for the Chinese community. Study group: The “Astro” project was designed for high-risk youths in Hong Kong and consisted of three psychosocial primary prevention programs conducted in structured group sessions. Methods: A three-year longitudinal study and control group comparisons are integrated in this project for the program evaluation. Results and conclusions: The findings showed that the experimental group, after participating in the programs, was generally better than the control group in terms of social skills, knowledge of drugs, refusal skills, attitudes towards drugs, and the behavioral intention to avoid drug abuse. It suggests that this program could function well as a drug prevention program.

Developmental disability (1)


This article reviews research conducted on the cigarette, alcohol, and illicit drug use of adolescents and adults with mental retardation (MR). The majority of the research related to substance use conducted on this population has been limited to surveys. Overall, results of these studies suggest that, although substance use is slightly lower among those with MR than among nondisabled comparison groups, it is nonetheless a problem for many individuals. This research is reviewed and a discussion of both the general and specific flaws of these studies follows. Further, the examination of education, prevention, and treatment programs for this population has been overlooked, indicating that individuals with MR are likely not receiving the services most appropriate for them. The article concludes with a discussion of several topics that need to be addressed in future studies, including research on potential best practices in the overlooked areas of substance abuse interventions.

GLBTQ youth (1)


Recent studies have indicated that substance abuse is a growing problem among youth and that the problem is even greater among gay, lesbian, bisexual, transgender, and questioning youth. The origins of substance abuse in sexual minority teens may be linked with feeling marginalized by society, seeking relief for feelings of depression and isolation, or desiring alleviation of the chronic stress associated with being stigmatized both interpersonally and intrapersonally. Prevention and intervention efforts can be successful in working with sexual minority adolescents in jeopardy of developing substance abuse problems. School-based clubs or groups for sexual minority youth are

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4 This article not included on disk.
one effective mode of prevention. School psychologists are uniquely poised to address this problem through education, prevention, and intervention efforts.

“High-risk” youth (6)


Context: Selective interventions targeting personality risk are showing promise in the prevention of problematic drinking behavior, but their effect on illicit drug use has yet to be evaluated. Objective: To investigate the efficacy of targeted coping skills interventions on illicit drug use in adolescents with personality risk factors for substance misuse. Design: Randomized controlled trial. Setting: Secondary schools in London, United Kingdom. Participants: A total of 5302 students were screened to identify 2028 students aged 13 to 16 years with elevated scores on self-report measures of hopelessness, anxiety sensitivity, impulsivity, and sensation seeking. Seven hundred thirty-two students provided parental consent to participate in this trial. Intervention: Participants were randomly assigned to a control no-intervention condition or a 2-session group coping skills intervention targeting 1 of 4 personality profiles. Main Outcome Measures: The trial was designed and powered to primarily evaluate the effect of the intervention on the onset, prevalence, and frequency of illicit drug use over a 2-year period. Results: Intent-to-treat repeated-measures analyses on continuous measures of drug use revealed time x intervention effects on the number of drugs used (P < .01) and drug use frequency (P < .05), whereby the control group showed significant growth in the number of drugs used as well as more frequent drug use over the 2-year period relative to the intervention group. Survival analysis using logistic regression revealed that the intervention was associated with reduced odds of taking up the use of marijuana (β = -0.3; robust SE=0.2; P = .09; odds ratio = 0.7; 95% confidence interval, 0.5-1.0), cocaine (β = -1.4; robust SE = 0.4; P < .001; odds ratio = 0.2; 95% confidence interval, 0.1-0.5), and other drugs (β = -0.7; robust SE = 0.3; P = .03; odds ratio = 0.5; 95% confidence interval, 0.3-0.9) over the 24-month period. Conclusion: This study extends the evidence that brief, personality-targeted interventions can prevent the onset and escalation of substance misuse in high-risk adolescents.


There are increasing demands in schools to provide social-emotional learning opportunities for students. This article reports on the utility of a universal coping skills program for young people at risk for depression in a rural context. The study deals specifically with the utility of the Best of Coping (BOC) program implemented to all students in Year 9 with a view to

**Program Profile: Best of Coping**

The BOC is a cognitive–behavioural program that aims to reinforce adolescents’ coping abilities in order to raise the use of Productive coping and lower the use of Non-Productive coping. Coping skills programs give adolescents the opportunity to experience a range of coping skills using both real and imagined stressors. Introducing programs into the school setting allows students to explore and develop an understanding of their own and alternative coping behaviours in a safe and supportive environment.

(Eacott & Frydenberg, 2008)
examining the benefits for students at-risk for depression. Two cohorts of Year 9 students (N = 159) participated in the program across 2006-07. Program effects were evaluated using the Adolescent Coping Scale and the Kessler Psychological Distress Scale and qualitative interviews. Successful intervention with the BOC was found to help students at-risk decrease dependence on Non-Productive coping strategies and reduce risk for negative mental health outcomes. Findings demonstrated that those in greatest need were able to benefit from a universal intervention program.


The short-term results of a randomized trial testing a brief feedback and motivational intervention for substance use among homeless adolescents are presented. Homeless adolescents ages 14-19 (N = 285) recruited from drop-in centers at agencies and from street intercept were randomly assigned to either a brief motivational enhancement (ME) group or 1 of 2 control groups. The 1-session motivational intervention presented personal feedback about patterns of risks related to alcohol or substance use in a style consistent with motivational interviewing. Follow-up interviews were conducted at 1 and 3 months postintervention. Youths who received the motivational intervention reported reduced illicit drug use other than marijuana at 1-month follow-up compared with youths in the control groups. Treatment effects were not found with respect to alcohol or marijuana. Post hoc analyses within the ME group suggested that those who were rated as more engaged and more likely to benefit showed greater drug use reduction than did those rated as less engaged. Limitations of the study are discussed as are implications for development of future substance use interventions for this at-risk group.


Examined the efficacy of the Opening Doors in-school drug prevention program. 253 high school students, 58 parents, and 38 program leaders reported program perceptions. Results show a very high program satisfaction level from all 3 groups, with parents reporting the highest levels. Findings suggest that areas for improvement include parent attendance, the invitation process, and support from schools. Feedback from program leaders included concerns about scheduling and time involvement.


The last two decades have witnessed a rapid development of substance abuse prevention programs. Most efforts to evaluate these programs have been limited...
to single program studies, and nearly all studies involving multiple drug prevention programs have involved school-based programs for general youth populations. In 1995, the Center for Substance Abuse Prevention (CSAP), with the Substance Abuse and Mental Health Administration (SAMHSA), funded the CSAP National Cross-site Evaluation of High Risk Youth Programs, a five-year, multi-site evaluation study involving 46 programs and over 10,500 youth at high risk for substance use (CSAP, 2002(a)). This article reports findings from this evaluation, focusing on program characteristics that help explain reductions in 30-day substance use among program participants. Programs found to be most effective in reducing substance use were those that offered strong behavioral life skills development content, emphasized team-building and interpersonal delivery methods, emphasized introspective learning approaches focusing on self-reflection, were based upon a clearly articulated and coherent program theory, and provided intense contact with youth. Programs utilizing these positive program components produced consistent and lasting reductions in substance use. These findings provide a solid basis for the adoption of positive program characteristics in the development of future prevention programming for high-risk youth.


Describes the development and impact of a self-instruction indicated drug abuse prevention program, Project Towards No Drug Abuse, using a sample of 288 students. It is noted that self-instruction programming often is used to help youth that are at high risk for dropout and drug abuse to complete their high school education. This article describes the justification for the self-instruction program, keys to good programmed self-learning, and how a 12-session health educator delivered program was converted to a self-instruction format. In addition, the immediate impact of a 3-group experimental trial is presented. Health educator led, self-instruction, and standard care control conditions were compared on knowledge change, and the 2 program conditions were compared on process ratings. 572 students completed surveys. Students attended an average of two-thirds of the sessions in the health educator led condition, whereas students completed an average of 83% of the self-instruction sessions. It was found that the self-instruction condition was easier to implement, provided better implementation, and resulted in learning as great as the health educator condition. However, the health educator condition was better received and perceived as of relatively higher quality.
Older adolescents (ages 18+) (10)


Identifying environmental factors reflected to alcohol use is important for program planning and evaluation in college alcohol and drug prevention programs. Little has been written concerning uses of data in environmental prevention efforts. This paper presents four brief interrelated case studies of how environmental modifications were used by a college alcohol prevention project to 1) change the marketing practices and service policies of a student-oriented bar, 2) alter the sales practices of a campus bookstore concerning alcohol paraphernalia, 3) to develop a campaign with the goal of reducing risk factors related to heavy drinking at private student parties, and 4) stop an unsafe bus from transporting students to bars in Mexico. Creative use of such environmental prevention approaches has potential benefit to colleges and universities concerned with the primary prevention of alcohol-related problems experienced by students.


This paper reports the findings of survey research recently completed in Melbourne, Australia among a sample of 379 bar and nightclub patrons. Drawing from the work of English researchers Howard Parker and Fiona Measham, this study examines the 'normalization' of young people's drug use and the links between this drug use and young people's 'time out'--their leisure time and 'cultural consumption' habits. The paper outlines the research participants' use of alcohol and other drugs including measures of both 'lifetime' and more recent use; the prevalence of illegal drug use within the peer group; the general accessibility and availability of illegal drugs, as well as participants' knowledge of various drug-related risks and harms. The use of alcohol and other drugs was found to be widespread, with 96% of survey respondents identifying as 'current drinkers', whilst 56% reported the 'lifetime use' of illegal drugs. Just over a third (35.2%) reported the recent (last month) use of an illegal drug, typically ecstasy, cannabis and/or amphetamines. I conclude that such findings provide further support for the claim that drug use is becoming increasingly normalized within youth populations in Australia. The paper closes with a brief discussion of the implications of these findings in terms of the design and implementation of drug prevention and harm minimisation strategies in Australia and elsewhere.


In this study lifetime and recent drug use patterns among 261 heterosexually identified 18- to 25-year-olds were assessed through brief street intercept surveys conducted in New York City. Marijuana, hallucinogens, powder cocaine, and ecstasy were the most frequently reported drugs for both lifetime and recent use. Findings further suggest significant differences in lifetime use along the lines of gender, race/ethnicity, and school enrollment for various drugs. Males reported using significantly greater numbers of different drugs compared to females, as did those not enrolled in school compared to school enrollees. These data suggest that illicit drug use in emergent adulthood does not develop in a monolithic manner and synergies must be considered in relation to gender, school enrollment, and employment that first surface in the child and adolescent
developmental stages. In addition, primary prevention efforts targeting child and adolescent drug use may mitigate the emerging adult and lifetime substance use.


This article reviews the most effective alcohol and other drug prevention programs used in higher education. As all campuses are unique, selection of programming depends on the campus setting and overall environment. Individually focused programs are generally divided into three major categories: (a) Educational/awareness approaches, (b) cognitive-behavioral approaches, and (c) motivational enhancement techniques. After careful review of the current practices in alcohol and other drug prevention programs, the most effective programs appear to include a combination of techniques. These programs are specific enough to focus on the unique needs of students at individual campuses, but are general enough to be utilized on most campuses with small modifications. The individually focused programs showed varied degrees of success with cognitive-behavioral approaches ranked positively, while educational/awareness programs generally proved to be not as successful. For programs to be successful it takes a combination of individual and environmental strategies along with a consortium of students, campus and community leaders, business owners, and other stakeholders to work together toward this common goal.


The current paper highlights the college years as a risk period for development, continuation, and escalation of illicit substance use and substance use disorders and reviews the literature related to the prevention and treatment of these disorders in college populations. Despite widespread implementation of college drug prevention programs, a review of the literature reveals few controlled trials targeting this population. However, alcohol prevention has been extensively studied, and many efficacious interventions for college drinking share theoretical and methodological underpinnings with interventions shown to be efficacious in drug prevention and treatment with other populations (i.e., school-based prevention, adolescent and adult drug treatment). These interventions could be adapted to target drug prevention on college campuses. Barriers to implementation and evaluation of these interventions on campus are discussed, and suggestions are made for future research and programmatic directions.


The illicit use of opioid analgesics represents a growing problem among American adolescents. In order to examine the correlates associated with the illicit use of opioid analgesics, a nationally representative sample of 4,522 high school seniors from the 2002 Monitoring the Future database was examined. Multivariate logistic regression indicated that illicit users of prescription opioid analgesics were significantly more likely to be male, White, and have lower grade point averages. Illicit users of opioid analgesics also reported higher rates of cigarette smoking, alcohol use, marijuana use, other illicit drug use, and problem behaviors. The present study provides evidence that the illicit use of opioid analgesics represents a problem among American high school seniors and effective prevention and intervention efforts are needed.
Environmental prevention strategies in club settings where music and dance events are featured could provide an important new arena for the prevention of drug use and other risky behaviours (e.g. sexual risk taking, intoxication and drug use, aggression, and driving under the influence). Electronic music dance events (EMDEs) occur in clubs that attract young, emerging adults (18-25 years of age) and attract individuals who engage in various types of drug use. Borrowing from the environmental prevention studies that focus on reducing alcohol use and related problems, a model for drug prevention in the club setting is proposed. Initially, an overview of the relationships between EMDEs and drug use, and other risky behaviours are presented. Next, rationales for environmental strategies are provided. Finally, an environmental approach to prevention of drug use and risky behaviours in clubs is described. This comprehensive set of environmental strategies, is designed to be mutually supportive and interactive. Environmental strategies are believed to provide potential for developing an efficacious prevention strategy. The environmental prevention approach presented here is composed of three intervention domains: (1) mobilization, (2) strategies for the exterior environment, and (3) strategies for the interior environment.


Purpose: The feasibility of a community-level drug prevention intervention based upon the principles of motivational interviewing within a further education college was investigated in a pilot study.

Design/methodology/approach: The implementation over the course of a single term of “Let’s Talk about Drugs” was studied with both action research methods and a quasi-experimental design. Findings: Modest qualitative evidence of attitudinal and environmental benefit provides some optimism that intervention of greater duration may have the capacity to produce more substantial impact. Research limitations/implications: The sustainability of the achieved institutional changes following the delivery of this intervention, most notably centring upon a revised drug policy, is questionable. No quantitative data on reduced drug use behavior or associated problems directly attributable to intervention was obtained.

Originality/value: Further education colleges offer relatively unexplored opportunities for drug prevention and harm reduction, at both individual and community levels. Three major lessons were learned: for the motivational interviewing approach to be applied with meaningful potential to effectively shaping behavior at the college level, greater input is required; quasi-experimental methods for evaluation are feasible and appropriate; and intervention must be coherent with, and shaped by, the specific college context.

Taken into consideration the limitations of conventional approaches in understanding the problem of young drug abuse, this paper shows how stresses emerging in adolescents’ confrontation with the fundamental concerns of existence lead to drug taking behavior. Based on a qualitative study conducted in Hong Kong, this paper suggests that young people take illicit drugs in order to relieve anxiety arising from some existential issues at this life stage, namely struggling with identity confusion, striving for connectedness with the significant others, searching for the meaning of life, as well as striking a balance between freedom and responsibility. It provides a frame of reference for examining the subjective experiences of young people in facing their life struggles and making choices regarding drug taking. It also helps fill the gap of the existing literature on substance abuse and draws implications for intervention, prevention, and research.


Examined factors underlying decreases in binge drinking by college students. 34 institutions where college students’ binge drinking increased and 60 institutions where it decreased over the 2 yrs that a drug prevention program operated were compared using an inductively derived taxonomy of prevention program elements, student variables, student substance use variables, use-related variables, and institutional variables. Results show that only prevention program elements discriminated between groups. Factor analysis identified 8 prevention factors, including: (1) student participation and involvement in prevention activities; (2) changing campus social/cultural environment using informational and educational processes; (3) student participation and involvement in program development and operation; and (4) curriculum infusion. These factors decreased in binge drinking by 28.1%. Factor synthesis yielded a 3-construct binge-drinking prevention model based on student participation and involvement strategies, educational and informational processes, and campus regulatory and physical change efforts. This model improved base-rate prediction of decreased binge drinking by 33.2%.
Part III: Risk and Protective Factors Influencing Youth Substance Use
Part III: Risk and Protective Factors Influencing Youth Substance Use

3.1. Individual level factors

Gender, age, ethnicity (6)


Alcohol use has been linked to other substance use and delinquency in adolescents. However, few studies have examined variations in these relationships in representative subsamples of gender, age and racial/ethnic groups. Respondents in this study were 19,321 New York State 7-12th grade students. After controlling for significant sociodemographic factors in a regression analysis, all of the alcohol measures remained strong predictors of both delinquency and illicit drug use. Significant interactions between alcohol measures and gender, age and racial/ethnic groups were also found. For example, the relationship between binge drinking and delinquency was stronger for males than females. The relationships between alcohol measures and both delinquency and illicit drug use were stronger for younger adolescents than older adolescents. American Indians showed an added risk over other groups of being delinquent and using illicit drugs if they began drinking at an early age. Prevention efforts to delay initiation into alcohol use are likely to have effects not only on alcohol misuse but also on the development of other substance use and delinquency.
This paper begins with definitions of the Asian/Pacific Islander (API) communities, then examines rates of adolescent drug use, risk and protective factors, and preventive intervention effectiveness focused on API communities. The limited epidemiological data suggest that in general, APIs are at a relatively lower risk for drug use than youth from most other ethnic groups. However, data also suggest that use may not be as low as generally assumed with rates for alcohol use, smoking, and some illicit drugs being equal to or exceeding those of African Americans and European Americans. The data demonstrate that there are differences among API subgroups, underscoring the importance of identifying Asian subgroups when studying substance use and when planning prevention and treatment. The limited data examining the etiology of drug use across API subgroups suggests that some of the risk and protective factors derived from majority based research may also be predictors for these populations. These data support the utility of examining the generalizability of existing prevention approaches among different API communities. Finally, further efforts should be made to encourage and support the evaluation of community-based programs that already target and deliver services to API youth.


Aims: To examine whether self-reporting a later stage of pubertal development in early adolescence predicts young adults’ use of illicit drugs. Design: Population-based prospective birth cohort study. Setting Follow-up of a cohort of mothers and their children, recruited between 1981 and 1983. Participants: Cohort of 2710 young adults who completed a self-report questionnaire about their use of cannabis and amphetamines at the 21-year follow-up. Measurements: Young adults’ use of cannabis and amphetamines were measured at the 21-year follow-up. Stage of pubertal development was assessed at the 14-year follow-up. Potential confounding and mediating variables were assessed between birth and when the child was 14 years. Findings: Of 2710 young adults, 49.9% (47.3 females and 52.7% males) reported that they had used cannabis and 21.0% (18.9% females and 23.3% males) reported that they had used amphetamines and cannabis by 21 years. In multivariate analyses, adolescents with a later stage of puberty were more likely to use cannabis or amphetamines in young adulthood. This association was not confounded by mother’s education or child’s gender and age. Part of the relationship was explained by the higher frequency of child externalizing behaviour at 14 years. Conclusions: The findings warrant further attention to puberty as a sensitive period in an individual’s development. With regard to prevention, there is a need to understand more about the pathways between pubertal development, child behaviour problems and substance use.


Aims: The aim of this article was to investigate the factors associated with ecstasy use in school-aged teenagers. Methods: This was a longitudinal study of adolescent drug use, which was undertaken in three towns in Northern Ireland. A questionnaire was administered annually to participants. In this article ecstasy use patterns amongst a cohort of young people aged 14-16 years participating in the Belfast Youth Development Study (BYDS) was explored. Findings: The percentage of those who had used ecstasy at least once increased from 7% when aged 14 years to 9% at 15 and 13% at 16 years. Female gender, delinquency, problem behaviours at school and the number of evenings spent out with friends each week were found to be significant variables.
predicting “ever use” of ecstasy in all 3 years by logistic regression. Conclusions: The findings suggest that ecstasy use patterns may be changing from their historical perception as a “party” drug, as the demographic profile ecstasy of users in this study reflected the traditional profile of illicit drug use during adolescence, which raises challenges for addressing the problems associated with this drug.


Tested two models that have been developed to explain risk and resiliency in drug prevention, and attempted to compare the effects of these two factors across gender and ethnicity. One of the models posits that separate elements make up each set and the other posits that a single factor can be either a risk or a resiliency factor depending on the presence or absence of resiliency or risk. A survey regarding past drug use was administered to a multiethnic sample of 609 seventh-grade students. The authors expected to find that high risk and/or low resiliency adolescents should report a higher level of involvement with drugs than high resiliency and/or low risk adolescents, and that the effects of risk and resiliency are moderated by gender and ethnicity. Results support the model in which risk and resiliency factors are a discrete set of factors and demonstrate that overall resiliency factors play a larger role than risk factors in substance use and drug resistance processes. Early interventions are important for both genders, but resiliency factors must be dealt with before initiation of substance use for males. Findings did not differ substantially across ethnicity.


Media reports have suggested that the use of 3,4-methylenedioxymethamphetamine (MDMA, or "ecstasy") is a significant problem across the United States. To date, however, available evidence has shown that the use of ecstasy has been concentrated among "rave" attendees, with mainstream youth remaining relatively immune from its proliferation. The current study builds on the ecstasy literature by examining the drug-using behaviors of 2,258 high school seniors with data collected through the Monitoring the Future program in 2002. Prevalence estimates of ecstasy use are generated and associations between ecstasy use, demographic characteristics, and alcohol and other drug use are explored. Ten percent of the sample reported lifetime ecstasy use, 7% reported use within the past 12 months, and 3% reported use within the past 30 days. Compared to non-users, 12-month ecstasy users were significantly more likely than non-users to be white and to have used all other drugs of abuse during the 12 months preceding the interview. These results suggest that ecstasy-related prevention efforts should target the at-risk population of rave attendees rather than the mainstream population of high school students.

**Sexual orientation (6)**


Aims: Several decades of research have shown that lesbian, gay and bisexual (LGB) adults are at high risk for substance use and substance use disorders (SUDs). These problems may often start prior to young adulthood; however, relatively little is known about risk for substance use in LGB
adolescents. The primary aims of this paper were to conduct a meta-analysis of the relationship between sexual orientation and adolescent substance use and a systematic review and critique of the methodological characteristics of this literature. Methods: Medical and social science journals were searched using Medline and PsycINFO. Studies were included if they tested the relationship between sexual orientation and adolescent substance use. Eighteen published studies were identified. Data analysis procedures followed expert guidelines, and used National Institutes of Health (NIH)-sponsored meta-analysis software. Results: LGB adolescents reported higher rates of substance use compared to heterosexual youth (overall odds ratio = 2.89, Cohen's d = 0.59). Effect sizes varied by gender, bisexuality status, sexual orientation definition and recruitment source. None of the studies tested mediation and only one tested moderation. One employed a matched comparison group design, one used a longitudinal design, and very few controlled for possible confounding variables. Conclusions: The odds of substance use for LGB youth were, on average, 190% higher than for heterosexual youth and substantially higher within some subpopulations of LGB youth (340% higher for bisexual youth, 400% higher for females). Causal mechanisms, protective factors and alternative explanations for this effect, as well as long-term substance use outcomes in LGB youth, remain largely unknown.


Aims: Several decades of research have shown that lesbian, gay and bisexual (LGB) adults are at high risk for substance use and substance use disorders, and a recent meta-analysis shows that these disparities most probably begin in adolescence; however, no studies to date have examined longitudinal growth in substance use in LGB youth and heterosexual youth to determine if they follow different trajectories into young adulthood. The primary aims of this paper were to estimate individual trajectories of substance use in youth and examine differences between self-identified LGB and heterosexual subsamples. Method: A school-based, longitudinal study of health-related behaviors of adolescents and their outcomes in young adulthood was used to test the hypotheses (The National Longitudinal Study of Adolescent Health). Participants were included if they were interviewed at all three waves and were not missing information regarding self-identified sexual orientation (n = 10 670). Results: Latent curve models (LCMs) showed that LGB identity was associated significantly with individual variability in substance use intercepts and slopes, above and beyond age, race and gender. Self-identified LGB youth reported higher initial rates of substance use and on average their substance use increased over time more rapidly than did substance use by heterosexual youth. Two other indicators of sexual orientation (same-sex romantic attraction and same-sex sexual behavior) were also associated with substance use trajectories, and differential results were found for youth who identified as “mostly heterosexual” and bisexual compared with youth who identified as completely heterosexual or homosexual. Conclusions: Sexual orientation is an important risk marker for growth in adolescent substance use, and the disparity between LGB and heterosexual adolescents increases as they transition into young adulthood. More research is needed in order to examine: causal mechanisms, protective factors, important age-related trends (using a cohort-sequential design), the influence of gay-related developmental milestones, curvilinear effects over time and long-term health outcomes.


Examined rates of substance use among homosexual adolescents in a sample of 2,946 high school students. Multiple survey items, rather than a single item, were used to identify gay, lesbian, and bisexual teenagers. Ss with consistent homosexual preferences had greatly elevated rates of
substance use. Those who displayed a homosexual preference but answered less consistently also had somewhat higher rates of substance use but were closer to heterosexual youths than to more consistent homosexual youths. The differences in substance use were least for alcohol use and greater for "hard" drugs. It is also noted that because this study used multiple items to measure sexual preference, more youths could be identified as potentially homosexual.


Objectives: Sexual-minority adolescents living in rural communities were compared with their peers in urban areas in British Columbia, exploring differences in emotional health, victimization experiences, sexual behaviors, and substance use. Methods: A population-based sample of self-identified lesbian, gay, or bisexual respondents from the British Columbia Adolescent Health Survey of 2003 (weighted n = 6905) were analyzed. Rural/urban differences separately by gender with the x² test and logistic regressions were tested. Results: Many similarities and several differences were found. Rural sexual minority adolescent boys were more likely than were their urban peers to report suicidal behaviors and pregnancy involvement. Rural sexual-minority adolescents, especially girls, were more likely to report various types of substance use. Rural status was associated with a lower risk of dating violence and higher risk of early sexual debut for sexual-minority girls and a higher risk of dating violence and lower risk of early sexual debut for sexual-minority boys. Conclusions: Location should be a demographic consideration in monitoring the health of sexual-minority adolescents. Lesbian, gay, and bisexual adolescents in rural communities may need additional support and services as they navigate adolescence.


OBJECTIVE. Specific family rejecting reactions to sexual orientation and gender expression during adolescence as predictors of current health problems in a sample of lesbian, gay, and bisexual young adults were examined. METHODS. On the basis of previously collected in-depth interviews, quantitative scales to assess retrospectively in young adults the frequency of parental and caregiver reactions to a lesbian, gay, or bisexual sexual orientation during adolescence were developed. The survey instrument also included measures of 9 negative health indicators, including mental health, substance abuse, and sexual risk. The survey was administered to a sample of 224 white and Latino self-identified lesbian, gay, and bisexual young adults, aged 21 to 25, recruited through diverse venues and organizations. Participants completed self-report questionnaires by using either computer-assisted or pencil-and-paper surveys. RESULTS. Higher rates of family rejection were significantly associated with poorer health outcomes. On the basis of odds ratios, lesbian, gay, and bisexual young adults who reported higher levels of family rejection during adolescence were 8.4 times more likely to report having attempted suicide, 5.9 times more likely to report high levels of depression, 3.4 times more likely to use illegal drugs, and 3.4 times more likely to report having engaged in unprotected sexual intercourse compared with peers from families that reported no or low levels of family rejection. Latino men reported the highest number of negative family reactions to their sexual orientation in adolescence. CONCLUSIONS. This study establishes a clear link between specific parental and caregiver rejecting behaviors and negative health problems in young lesbian, gay, and bisexual adults. Providers who serve this population should assess and help educate families about the impact of rejecting behaviors. Counseling families, providing anticipatory guidance, and referring families...
for counseling and support can help make a critical difference in helping decrease risk and increasing well-being for lesbian, gay, and bisexual youth.


Background: Numerous studies have documented higher substance use rates among bisexual than heterosexual young women, although little is known about the developmental factors contributing to these differences. Based on self-reported sexual orientation collected at age 23, this study identified similarities and differences between bisexual and heterosexual women in their substance use at ages 14 and 18, compared these groups at ages 14 and 18 on key psychosocial factors known to predict young adult substance use, and determined whether these psychosocial factors at age 18 could account for sexual orientation differences in substance use at age 23.

Methods: Longitudinal survey data from a West Coast cohort were used to compare heterosexual (n = 1,479) and bisexual (n = 141) women on their substance use and psychosocial characteristics.

Results: During adolescence, bisexual women were more likely to have been current and solitary substance users; reported stronger pro-drug beliefs and lower resistance self-efficacy; perceived greater parental approval of their substance use; had more exposure to substance-using peers; and reported poorer mental health. By age 23, bisexual women had higher rates of current substance use, greater quantity and frequency of use, and more problematic alcohol and drug use. Differences in problematic use at age 23 could be partially explained by risk factors assessed five years earlier at age 18, particularly pro-drug social influences and beliefs. Conclusions: Notwithstanding the lack of longitudinal data on sexual orientation, these results provide important insights regarding the drug prevention needs of bisexual women.

Attitudes, beliefs, and behaviours (14)


This paper examines the prevalence of, frequency of and factors underpinning, substance use by young people. The research augments previous exploration of the causes of youth drug use by integrating factor analysis into traditional statistical techniques to identify composite risk factors for different forms of drug use (any drugs, soft drugs, hard drugs, inhalants) by the youth population in Wales. The existing risk-focused research literature is further extrapolated through detailed investigation of the relative salience of risk factors by specific gender and age group in the Welsh sample. Reported drug use by the whole sample and specific sub-groups generally accorded with the findings of previous research with equivalent age groups in Wales, the UK and Europe. Those factors exerting the most influence upon youth drug use were: anti-social behaviour/attitudes, drug-related behaviour/attitudes, negative thinking, psychological problems and behavioural problems. This study affords a first tentative step on the road to a more comprehensive and sensitive exploration of the role of composite risk factors in drug taking behaviour by young people. Findings imply the need for comprehensive, multi-dimensional drug prevention programmes addressing multiple and composite risk factors, targeted appropriately upon specific sub-groups of the youth population.

The purpose of this study was to provide a descriptive profile of the alcohol, cigarette, marijuana and cocaine use practices among adolescents and to examine the relationship between employment, political beliefs, religious beliefs and substance use behaviors among high school seniors participating in the Monitoring the Future Study during the 2002 academic school year. Data from the Monitoring the Future (MTF) study (2002 12th grade core data) was used for this study. Logistic regression models were used to examine the relationship between substance use behaviors and employment, political beliefs, and religiosity. Analysis showed that males and females who believed religion was very important were less likely to have initiated alcohol use, to be a current user, and to have binge drank. A significant association was found for all alcohol use variables for those individuals who worked moderate amounts at an after school job. Political beliefs were found to be associated for initiation and current alcohol use but not for binge drinking. Political beliefs, religion, and employment were all significantly associated with cigarette use and cocaine use. Conceptualization of substance use behavior and its prevention and treatment should include consideration of such key cultural and social factors as religiosity, employment and political beliefs of adolescents.


Childhood disruptiveness is one of the most important antecedents of heavy substance use in adolescence, especially among boys. The first aim of the present study is to verify whether parental monitoring and friend conventionality protect disruptive boys from engaging in heavy substance-use in adolescence. The second purpose is to examine whether these protective effects are strengthened by attachment to parents or friends respectively. Finally, the third objective is to verify whether the expected protective effect of parental monitoring could be mediated through exposure to conventional friends. A sample of 1,037 boys from low socioeconomic neighbourhoods was followed from childhood (age 6) to adolescence (age 15). Parent, teacher, and self-reported measures were used to measure disruptiveness, parental monitoring, family attachment, friend conventionality, and attachment to friends. Results suggest that parental monitoring and friends’ conventionality mitigated the relationship between childhood disruptiveness and adolescence heavy substance use. Exposure to conventional friends further mediated the protective effect of parent monitoring. The postulated enhancement of attachment quality on the protective effect of parents or peer behaviors was not confirmed, but low attachment was related to heavier substance use in highly monitored disruptive boys. Parental monitoring, family attachment, and peer conventionality are factors amenable to intervention, and thus represent promising targets for future prevention strategies aimed at-risk boys. These results underscore the importance of simultaneously addressing the behavioral and the affective dimensions in interventions with parents.


Purpose: To examine the correlations between multiple risk behaviors in adolescent populations to document the extent to which problem behaviors are intercorrelated and to identify factors associated with variations in these correlations. Methods: Studies from 1977 through the end of
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1999 that included two or more problem behaviors in adolescents were identified by literature searches using the PsychLit database, Social Sciences Citation Index, manual journal searches and “ancestry” approaches. The behaviors studied were alcohol use, marijuana use, illicit drug use, cigarette smoking, general deviant behavior, and sexual activity. Included studies reported correlation coefficients between variables. Results: Across all studies, the mean correlation between any two pairs of problem behaviors was 0.35, with a standard deviation of 0.28. This suggests that, on average, about two-thirds of the variation in problem behavior is the result of unique rather than common causes. The magnitude of the correlations varied as a function of the age of the adolescent, with lower correlations being evident for older adolescents. In addition, the magnitude of the correlation varied as a function of when the study was conducted, with studies of past generations showing stronger connections between risk behaviors than current generations. Conclusions: The data suggest that there is considerably more unique variation in classic adolescent problem behaviors than common variation.


Empirical evidence suggests that the setting of drug use is an important factor in an adolescent's decision to use drugs. In this study, one salient setting is examined: truancy from school. A total of 1000 eleventh grade students from one district in the Mid-Western United States were invited to participate in an in-school anonymous survey in 2006. Truancy was a common behaviour among the surveyed students and drug use while skipping school was a common behaviour among truants. The establishment of truancy as a setting for drug use may have important implications. Limitations, implications and future directions are discussed.


The current study investigated the effects of baseline levels of academic achievement and longitudinal trends in normative beliefs on adolescent substance initiation across a 42-month time period. Participants were 272 rural adolescents who were an average of 12.3 years old at the baseline assessment. Academic achievement positively predicted the intercept and negatively predicted the growth-trajectory of normative beliefs regarding peer substance behavior. Further, baseline academic achievement negatively predicted initial levels, as well as the growth-trajectory, of substance initiation. The discussion addresses the influence of academic achievement and normative beliefs on substance initiation and the utility of latent growth curve modeling in studying longitudinal change. In addition, implications for prevention programming are discussed.


This paper examines the drug-related decisions of a previously under researched group of children; those in their pre-teen and early teenage years. Based on a prospective study of 92 ‘at risk’ children, it explores the reasons which they gave for their use or non-use of illegal drugs. The accounts of those who used drugs on a regular or occasional basis are strongly supportive of the importance of personal choice, emphasising the role of enjoyment and boredom as the main motivating factors. The reasons given for not using drugs included a lack of interest in the activity, fear of the effects of the drug and a concern that drug taking would compromise other valued activities or pursuits. The anticipated reaction of parents, and the extent to which they had internalised parental values on drugs, also appeared to act as an important restraint for some of
the children. While there is a vital role for drug education in seeking to influence children's drug-related decisions, the study's conclusions also emphasise the significance of parents in this regard. The fact that the overwhelming majority of the children reported using drugs because they enjoyed them or because they were bored also suggests that the provision of alternative activities should be central to any preventive strategy.


While the epidemiologic trends concerning alprazolam (Xanax®) are unknown, the use of benzodiazepines, in general, has increased in popularity among youth within recent years. To shed light on the drug problem, the current pilot study used a qualitative approach to investigate relevant beliefs, norms, and perceived addiction associated with alprazolam initiation among 46 youth who were attending an inpatient drug treatment program during the spring of 2004. Overwhelmingly, most participants stated that addiction to alprazolam occurs as early as initial consumption. Most youth in the study stated that their friends felt it was normal to use alprazolam. In addition, their control beliefs revealed that if someone wanted to stop it would be difficult because of the widespread use in their communities and family social reinforcement involved with its use. In this study, a majority of students stated that medical professionals such as doctors and pharmacists were the greatest facilitator of alprazolam acquisition. Implications for these results are discussed.


This paper presents the findings of a five-year study of year-11 pupils (15-16 years old), based on a sample drawn from seven schools in the North West of England. It examines: use, feelings about close friend's use and perceptions of the health-related risks of specific drugs. The findings conform with those examining other similar populations, in identifying that 'The Usual Suspects', alcohol, tobacco and cannabis are the predominant drugs used by young people at 15-16. The reported use of alcohol and tobacco has remained consistent throughout the course of the study. However, beliefs about the health risks of these drugs have altered over the five-year period. The picture for cannabis has changed in terms of use and feelings about use; pointing to a continued process of normalization for this drug. The paper places the findings in the context of other recent studies; the specific value of the current study arises from the use of pupils from the same schools on a year on year basis (giving a total sample of 4059).


This paper uses an integrated model of behavior change to predict intentions to use marijuana occasionally and regularly in a US-based national sample of male and female 12 to 18 year olds (n = 600). The model combines key constructs from the theory of reasoned action and social cognitive theory. The survey was conducted on laptop computers, and half of the sample was female. The analysis serves as a basis for discussion about using theory in various stages of planning a campaign to decrease marijuana use among adolescents. The theory, model fit, and tests of the mediation and sufficiency assumptions can be used to demarcate planners' choices about behavioral goals and intervention messages.
Drug prevention campaigns commonly seek to change outcome expectancies associated with substance use, but the effects of violating such expectancies are rarely considered. This study details an application of the expectancy violation framework in a real world context by investigating whether changes in marijuana expectations are associated with subsequent future marijuana intentions. A cohort of adolescents (N = 1,344; age range = 12-18 years) from the National Survey of Parents and Youth was analyzed via secondary analysis. Nonusers at baseline were assessed 1 year later. Changes in expectancies were significantly associated with changes in intentions (p < .001). Moreover, in most cases, changes in expectancies and intentions had the strongest relationship among those who became users. The final model accounted for 31% of the variance (p < .001). Consistent with laboratory studies, changes in marijuana expectancies were predictive of changes in marijuana intentions. These results counsel caution when describing negative outcomes of marijuana initiation. If adolescents conclude that the harms of marijuana use are not as grave as they had been led to expect, intentions to use might intensify.


The present article explored two different dimensions of spirituality that might tap negative and positive relations with adolescent drug use over a 1-year period. Non-drug-use-specific spirituality measured how spiritual the person believes he or she is, participation in spiritual groups, and engagement in spiritual practices such as prayer, whereas drug-use-specific spirituality measured using drugs as a spiritual practice. Self-report questionnaire data were collected during 1997-1999 from a sample of 501 adolescents in 18 continuation high schools across southern California. Participants ranged in age from 14 to 19 and were 57% male, with an ethnic distribution of 34% White, 49% Latino, 5% African American, 7% Asian, and 5% other. A series of general linear model analyses were conducted to identify whether or not two different spirituality variables predict drug use (cigarettes, alcohol, marijuana, hallucinogens, and stimulants) at 1-year follow-up. After controlling for baseline drug use, non-drug-use-specific spirituality was negatively predictive of alcohol, marijuana, and stimulant use, whereas drug-use-specific spirituality failed to be found predictive of these variables one year later. Conversely, drug-use-specific spirituality was positively predictive of cigarette smoking and hallucinogen use, whereas non-drug-use spirituality failed to be found predictive of these variables. The results provide new evidence that suggests that spirituality may have an effect on drug use among adolescents. The drug-use-specific measure of spirituality showed "risk effects" on drug use, whereas the other measure resulted in "protective effects," as found in previous research. Knowledge of the risk and protective patterns and mechanisms of spirituality may be translated into future drug use prevention intervention programs.


Aims: To: (1) estimate the proportion of students exposed to specific types of information regarding the positive and negative effects of ecstasy, (2) test models that quantified the relationship between exposure to these messages and subsequent ecstasy use, controlling for peer drug use and sensation-seeking. Methods: As part of the College Life Study, 447 students, aged 17-20 years,
from a university in the mid-Atlantic region of the US completed an in person interview plus three follow-up assessments. Findings: Individuals who had heard a greater number of negative messages were significantly more likely to use ecstasy, even controlling for positive messages, prior ecstasy use, peer ecstasy use, perceived harm, sensation-seeking, sex and race. Some messages were significant at the bivariate level. Conclusions: Ecstasy use may have been influenced more by the content of the messages than by the quantity or diversity of messages. Interventions should be designed to address both positive and negative perceptions about a particular drug, rather than focusing exclusively on the negative information. Future evaluations should focus on the effectiveness of multi-pronged sustainable prevention programs in reducing adolescent drug use risk.


Much is known about patterns of drug use by young people - especially in terms of measures of “ever” usage; but relatively little is known about young people’s feelings about such usage. This paper presents findings of a quantitative study based on a previous qualitative study. Findings are reported on drug use; views on the use of cannabis, amphetamines and heroin; views on the health risks of various drugs; and the relationship between reported drug use and expressed views in 15-16 yr olds. The findings are discussed in relation to the extent to which illegal drug use can be considered to be “normalized” as part of young people's lives, toward the end of their compulsory schooling. While the findings provide some evidence for both sides of the “normalization debate,” it is concluded that there is only weak evidence that normalization, even of cannabis use, is true for young people of this age group. However, if drug use is increasing and the age of onset of such use decreasing, then for these young people as they get older, and for future cohorts at the end of their compulsory schooling, normalization of certain forms of drug use may occur.

Psychological assets and risk factors (4)


The use of illicit and licit drugs continues to be a major public health concern. Many prevention and drug education programs address this issue by attempting to enhance self-esteem. The idea is that increased levels of self-esteem will serve as a protective factor in decreasing the motivation and increasing the resistance to use drugs. This study explored the relationship between area specific self-esteem and adolescent substance use. Participants (n = 700) completed a self-report questionnaire which included items measuring the use and expected use of selected substances. Results indicated significant differences in home and school self-esteem scores between users/expected users and non-users of a given substance for all 14 behavioral measures. Additionally, the peer, home, and school sub-scales as a set were found to distinguish between users and non-users for all 14 behavioral measures. Results should be of value to those designing prevention programming.

The relationship of self-esteem and depression with alcohol, tobacco, and other drug (ATOD) use was tested in a California statewide sample of more than 4,300 Asian American high school students comprising five subgroups: Chinese, Japanese, Korean, Filipino, and Vietnamese. Estimated prevalence rates of alcohol, tobacco, and marijuana use among males and females from these Asian American subgroups are presented. Correlations revealed that cigarette, alcohol, and marijuana use were generally more related to high depression and low self-esteem in females than in males. Logistic regression analysis with only the female subjects investigated whether the relationship between the psychological variables and ATOD use was maintained even after controlling for traditionally important constructs in ATOD use (grade level in school, born in the United States, ethnicity, and ATOD use by friends). These results indicated that for females, depression was significantly related to alcohol and tobacco use, but self-esteem was not. Neither self-esteem nor depression was a significant contributor to marijuana use. Issues related to the application of these results are discussed.


Young injectors are a group with high-risk behaviours, particularly with respect to HIV infection and hepatitis C. A leading strategy to prevent these infections could be the prevention of injection, especially among the youngest individuals. Analyses on initiation into drug injection from a prospective cohort study of street youth conducted in Montreal, Canada were reported. Among 118 non-injector participants under 18 years of age followed for an average of 1.31 years, it was estimated that the incidence rate of injection was 22.7 per 100 person-years. Independent predictors of initiation were: a lifetime history of use of ≥4 types of drugs, recent daily alcohol drinking, a recent episode of homelessness, a lifetime history of rape, and recent involvement in survival sex. The observed high rate of initiation into injection clearly indicates that interventions to prevent injection should target especially adolescent street youth. These interventions should address simultaneously individual and structural factors, such as substance abuse and living conditions.


(from the chapter) This chapter considers the substance use and abuse and mental health of sexual-minority youths. Attention is first given to barriers in research that have limited the understanding of the lives of sexual-minority youths, including measurement and sampling challenges. Past research on adolescent sexual orientation, substance use and abuse, and mental health is then reviewed, with a focus on recent population-based studies that have included attention to these concerns. Finally, analyses from the National Longitudinal Study of Adolescent Health (the Add Health study) are presented. The Add Health study is the first nationally representative study of U.S. adolescents that incorporates questions relevant to adolescent sexual orientation. Results from analyses of adolescents' reports of same-sex romantic attractions and relationships and their associations with indicators of substance use and abuse and mental health are then presented.
Previous substance use (9)


Purpose: To examine how adolescents' attitudes and social skills affect current substance use and intentions to use substances in the future. Methods: An anonymous questionnaire was administered to 2646 seventh graders in their classrooms. The questionnaire was developed to measure the frequency of tobacco, alcohol, and other substance use, anticipated use, positive attitudes toward drug use, self-efficacy to say "no," decision-making skills, advertising-viewing skills, anxiety-reducing skills, communication skills, drug-resistance skills, perception of peer substance use, and weapon-carrying behavior. Ethnicity classified respondents as "white" or "students of color" and family structure indicated one vs. two-parent families. Data were analyzed with Spearman's r, analysis of variance, and multiple linear regression. Results: Forty-one percent of students were minority, 50.6% female, over 90% were either 12- or 13-year-olds, and 69.9% lived in two-parent families. A multiple linear regression model demonstrated that self-efficacy to say "no," positive attitudes toward drug use, perception of peer substance use, male gender, weapon-carrying, and fighting accounted for 51% of the variation in the current use multiple substance scale. Anticipated substance use during the subsequent year was significantly associated with current substance use, positive attitudes toward drug use, self-efficacy to say "no," drug-resistance skills, weapon-carrying, and fighting behavior. This model accounted for 73.9% of the variance in anticipated substance use. Conclusions: In today's world, where drug use is common, building adolescents' drug-resistance skills and self-efficacy, while enhancing decision-making capacity, may reduce their use of illegal substances.


Background. The 'gateway' pattern of drug initiation describes a normative sequence, beginning with alcohol and tobacco use, followed by cannabis, then other illicit drugs. Previous work has suggested that 'violations' of this sequence may be predictors of later problems but other determinants were not considered. The role of pre-existing mental disorders and sociodemographics were examined in order to explain the predictive effects of violations using data from the US National Comorbidity Survey Replication (NCS-R). Method. The NCS-R is a nationally representative face-to-face household survey of 9282 English-speaking respondents aged 18 years and older that used the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI) to assess DSM-TV mental and substance disorders. Drug initiation was estimated using retrospective age-of-onset reports and 'violations' defined as inconsistent with the normative initiation order. Predictors of violations were examined using multivariable logistic regressions. Discrete-time survival analysis was used to see whether violations predicted progression to dependence. Results. Gateway violations were largely unrelated to later dependence risk, with the exception of small increases in risk of alcohol and other illicit drug dependence for those who initiated use of other illicit drugs before cannabis. Early-onset internalizing disorders were predictors of gateway violations, and both internalizing and externalizing disorders increased the risks of dependence among users of all drugs. Conclusions. Drug use initiation follows a strong normative pattern, deviations from which are not strongly predictive of later problems. By contrast,
adolescents who have already developed mental health problems are at risk for deviations from the normative sequence of drug initiation and for the development of dependence.


Notes that much research has documented that youthful substance use typically follows a sequence starting with use of alcohol or tobacco or both and potentially proceeding to marijuana and then hard drug use. This study examined the probabilities of progression through each stage of their covariates. A secondary analysis of data from the National Household Survey on Drug Abuse (1979-1997) was conducted with particular sensitivity to the nature of substance use progression, sampling procedures, and reliability of self-report data. The results show that progression to marijuana and hard drug use was uncommon among persons born before World War II. The stages phenomenon essentially emerged with the baby boom and rose to a peak among persons born around 1960. Subsequently, progression risks at each stage declined. Progression risks were also higher among younger initiators of alcohol, tobacco, or marijuana use. The authors conclude that the recent increase in youthful marijuana use has been offset by lower rates of progression to hard drug use among youths born in the 1970s. Dire predictions of future hard drug abuse by youths who came of age in the 1990s may be greatly overstated.


This brief review provides an overview of this topic; it is not a critical review. Polydrug use is a poorly defined concept; it is taken here to mean the simultaneous use of more than one drug. Data on polydrug use is seldom systematically collected, and the use of alcohol and tobacco in combination with illegal drugs is frequently overlooked. If alcohol and tobacco are included, most users are polydrug users, since these drugs are used by most users of illegal drugs, and many people with alcohol problems also use illegal drugs. Polydrug use has increased; drug availability, cultural context and the 'normalization' of drug use are important factors. Gender and racial differences are observed in the prevalence of polydrug use. Implications for drug prevention include the importance of targeting multiple substance use rather than single substances. Aiming prevention campaigns at younger people and focusing on 'gateway' drugs might be more effective. But polydrug users are diverse, and a variety of strategies (aimed at different types of polydrug users) are necessary. Implications for treatment include the evidence of the greater difficulty that polydrug users have in quitting; they may therefore require additional help. A fuller, systematic review is required; it is expected that this would recommend the commissioning of additional research on this poorly understood phenomenon.


Data from the Canadian Youth Smoking Survey (n = 27,030 in 2006; n = 16,705 in 2004; n = 11,757 in 2002) were used to examine changes in the prevalence and comorbid use of alcohol, tobacco, and marijuana over time and examine if demographic factors and binge drinking are associated with comorbid substance use among youth. Alcohol was the most prevalent substance used, and it was rare to find youth who had used tobacco or marijuana without also having tried alcohol. Youth who reported binge drinking were substantially more likely to also have tried tobacco
and/or marijuana. These data suggest that multi-substance prevention programs are required for youth populations.


Investigated the prevalence of illicit drug use beyond that of mere experimentation, examining the "capture-rates" of cannabis, amphetamines, ecstasy and cocaine used in a cohort of 1,653 14-16-yr-old adolescents in South London. The transition rate from opportunity to use to actual use was most pronounced for cannabis (with a capture rate of 1 in 5), followed by amphetamines, then ecstasy and finally cocaine. However, regular use as a result of having ever used was lowest for amphetamines and cocaine. Age appeared to be a protective factor since the mean age of those who had never been offered either of the drugs was consistently under 15 yrs of age. In contrast, early onset of drinking and smoking appeared to be a risk factor in those who are offered cannabis and go on to become regular users. While the study contributes to the understanding of pathways and patterns of adolescent substance activities, it is contended that there are also implications for the targeting of early interventions and educational initiatives for those with early onset and rapid escalation in drinking and tobacco use.


The drug use patterns and behaviours of 90 young people who reported cannabis use from the age of 11/12 years when they entered post primary schooling and continued to report its use during three further annual data waves of the Belfast Youth Development Study (a longitudinal study of the onset and development of adolescent drug use) until the age of 15 are examined in this paper. The data collected from these young people revealed high levels of both licit and illicit drug use compared with young people who have not used cannabis by the age of 15. The findings suggest the existence of a 'hidden' high risk group of young people who continue to attend school regularly. This raises the question about the extent to which their needs are being met by existing school based drugs education and prevention initiatives which are often delivered through a standardised strategy for all school aged young people.


Although smoking initiation is rare in young adulthood, the progression to a higher level of smoking still occurs at this developmental stage. Thus, this study was aimed at exploring predictors of the transition from experimental to daily smoking in late teens and young adults using the 2nd and 3rd waves from the National Longitudinal Study of Adolescent Health. Predictors were chosen based on Problem Behavior Theory and others that have been found to be influential in the literature. Of the variables studied, age, racial-ethnic identity (Black and Hispanic as compared to White youth), risk-taking tendency, and marijuana use predicted daily smoking 5 years later. Only one predictor, GPA, was protective for reducing the likelihood for the transition to daily smoking. The results are discussed in regard to implications for prevention of the progression to persistent daily smoking.

Smoking among teens and college students is a significant public health challenge. Tobacco, marijuana, and alcohol continue to be the most commonly abused drugs by teens and young adults. Educational efforts have resulted in increased awareness of the mortality and morbidity attributed to smoking, second-hand smoke, and prenatal exposure to tobacco. Short- and long-term consequences of marijuana use are well documented in the literature, but they have received less wide spread attention. Even less well known is the relationship between these substances. Does use of one lead to use of the other? Are there synergistic and/or antagonistic effects when these substances are used together? Answers are needed to these questions to understand the prevalence of use and the impact of these drugs on the nation’s youth and young adults. The gateway theory of drug use is often used to describe the progression from using alcohol or tobacco, to marijuana, and later use of other drugs like MDMA, cocaine, and heroin. While tobacco use does commonly precede marijuana use, it is proposed that marijuana may be a “gateway drug” to tobacco smoking. Research with university students is suggesting that cigarette-smoking initiation often follows or coincides with marijuana use.

3.2. Family level factors

Attachment (3)


Aim: The aim of this study was to determine differences in psychosocial context of occurrence of cigarette smoking and alcohol and drugs use between adolescents living in foster homes and those living with parents. Methods: The study examined 58 adolescents (14-17 years) living in foster homes and 245 living with parents using an anonymous questionnaire. Findings: Consumption of tobacco and cannabis was more common in the group of children living in foster homes. They tried these substances earlier and used them more frequently. The most important predictor for current smoking was the number of peers who smoked. Another important predictor of current smoking was an expressed feeling of loneliness. The studied groups did not differ significantly in the occurrence of alcohol drinking. Conclusions: These results suggest that suitable prevention programmes with emphases on social groups living under adverse conditions are needed. Further research should be conducted to give more detailed insight into the reasons and psychosocial factors that precipitate the start and perpetuation of these habits in diverse environments.


A study of protective factors against substance use and sexual risk taking was conducted among 610 high-poverty urban youth. Higher levels of family attachment, social support, involvement, and self-esteem were associated with lower levels of risk behaviors.

A new approach to assessing family attachment patterns is presented, using a composite measure of individual attachment representations based on the Bartholomew Attachment Interview. A cluster analysis yielded three different patterns in a sample of N = 37 families with a drug dependent adolescent (age 14-25) and both biological parents. A "triangulated" pattern (mothers: preoccupied; fathers: dismissing; adolescents: fearful) was found in 65% of the sample. A total of 19% showed an "insecure" pattern (mothers, fathers, and adolescents: fearful) and 16% a "near-secure" pattern (mothers and adolescents: secure; fathers preoccupied). Preliminary comparisons between these groups indicate differences in comorbid psychiatric disorders, in individual and family functioning, but not in addiction severity. There is a trend towards differences in outcome of family therapy. Implications for treatment and further research are discussed.

Parenting practices (5)


Using a probability sample of 4,230 adolescents from grades 7-12, negative binomial regression was used to estimate the effects of peer and six family variables on the risk of adolescent drug use. Peer drug use had relatively strong effects of adolescent drug use. Parental drug attitudes, sibling drug use, and adult drug use had significant direct effects net of peer influences. In addition, they had significant indirect effects that were mediated by peer drug use. The influences of parental monitoring, attachment to mother, and attachment to father were statistically significant but relatively small. The findings applied to alcohol, binge drinking, cigarettes, marijuana, and other illicit drugs. Editors' Strategic Implications: The authors interpret their findings as being more consistent with social learning than social control theory. This research, although cross-sectional and limited to adolescents' self-reports, contributes to a growing literature on the direct and indirect influences of parents on their teens' substance use rates. It speaks to the need for school- and community-based prevention efforts to focus on families as well as peers.


The current study explored the relationships between parenting practices and adolescent drug use. Suburban middle school students (N = 2129) completed surveys that included measures of perceived parental monitoring, discipline and setting an anti-drug message as well as measures of drug-related knowledge, attitudes and peer norms. Results indicated that effective parenting practices had a direct protective effect in terms of adolescent drug use and that the protective effect of parenting practices remained significant after including the effects of parenting on adolescent drug-related knowledge, attitudes and perceived norms in a structural equation model. These findings suggest that effective parenting practices have a robust protective effect on youth drug use via multiple pathways that extend beyond parenting effects on the most proximal predictors of adolescent drug use.

The effects of parental behaviors, attitudes, and drug-use as perceived by adolescents on the latter’s attitudes toward and intent to use psychoactive substances were studied. Ss were 195 9th, 10th, and 11th graders. Perceived parental rejection, acceptance, and attitudes significantly differentiated between adolescents who reported favorable attitudes toward and high intent to use substances and those who expressed less favorable attitudes. On most parameters, the father’s influence was significant, whereas the effect of the mother did not reach significance. Positive and significant relationships were also found between perceived parental rejection, acceptance, and attitudes and adolescent attitudes and intent to use psychoactive substances. No relationships were found between controlling parental behavior and adolescent attitudes and intent to use psychoactive substances. The role of the parents, as well as implications of the findings for prevention are discussed.


Adolescents with high sensation-seeking tendencies often seek out thrill seeking experiences to satisfy their need for stimulation and sensation. In many cases, sensation-seeking adolescents fulfill their need for stimulation and sensation by using illicit substances. However, not all high sensation seekers use drugs, although the factors that prevent or buffer sensation seeking remain unexplored. This study fills this gap in extant research by examining the role of authoritative parenting as a protective factor that prevents or buffers cigarette and marijuana use by adolescents with high sensation-seeking tendencies. Data from 1,461 adolescents attending 6th through 8th grades in central Colorado were gathered during a semester-long classroom-based intervention to prevent the onset or further use of cigarettes. Results indicate that authoritative parenting moderated the effect of sensation seeking on adolescent marijuana attitudes, intentions, and peer influence but not behaviors. Further, authoritative parenting was a stronger influence than sensation seeking on cigarette-related outcomes with just the opposite effect observed for marijuana-related outcomes.


Purpose: Identify the number and characteristics of heterogeneous trajectories of parental monitoring and communication among a sample of urban, racial/ethnic minority youth and examine the effects of these patterns on alcohol, cigarette and marijuana use. Methods: The study sample (n=2,621) was predominantly African American or Hispanic (38% and 32%, respectively) and low-income (67% received free, or reduced price, lunch). They completed classroom-based surveys when in 6th-8th grades. Multilevel general growth mixture modeling was used to identify the heterogeneous trajectories of parental monitoring and communication and estimate the effects of these distinct patterns on drug use in 8th grade. Results: Four trajectories of parental monitoring and communication were identified: (1) High (76.4%), (2) Medium (9.1%), (3) Decreasing (6.0%) and (4) Inconsistent (8.5%). Relative to those with high monitoring/communication, youth in the decreasing and inconsistent trajectories were at significantly greater risk for past year and past month alcohol and marijuana use and having ever smoked a cigarette. After controlling for family composition, only youth in the decreasing trajectory were significantly more likely to report substance use in 8th grade. Conclusions: Findings support the role of parents in preventing drug
use during early adolescence and suggest that efforts to improve the level and consistency of parental monitoring and communication may be a fruitful target for prevention. Many youth initiate use of alcohol, tobacco or marijuana in this critical developmental period and considered with the health and social consequences of use, engaging parents in preventing drug use should remain a priority for prevention.

**Family structure (2)**


Data from the 2004 Monitoring the Future survey examined a nationally representative cross-sectional sample of 8th to 12th grade adolescents in rural and urban schools from across the United States (N = 37,507). Results found that drug use among daughters living with single fathers significantly exceeded that of daughters living with single mothers, while gender of parent was not associated with sons’ usage. This distinction in adolescent drug use between mother-only versus father-only households is largely overlooked in contemporary studies. Factors responsible for variations in sons’ and daughters’ usage in single-parent families have important implications for future drug prevention efforts.


Adolescent substance use has become a serious concern nationwide. Although there are many ways of viewing adolescent substance use, family influence has been established as one of the strongest sources of risk and protection. A review of the literature indicated relevant theories for understanding adolescent substance use and specific family-based variables influencing adolescent substance use. In general, there seems to be a relationship between adolescent substance use and family-based risk and protective factors. Relevant theories identified in the literature review include family systems theory, social cognitive theory, social control theory, and strain theory. Specific family-based risk and protective factors include family relationships such as with siblings and parents and family characteristics such as ethnicity and religious backgrounds. Future implications for research and prevention/intervention in relation to family-based risk and protective factors are discussed.

See also: Fallu et al., 2010 (“Attitudes, beliefs, and behaviours”)

### 3.3. Community, school

**School culture and connectedness (6)**


Purpose To examine associations between social relationships and school engagement in early secondary school and mental health, substance use, and educational achievement 2-4 years
Methods School-based longitudinal study of secondary school students, surveyed at school in Year 8 (13-14-years-old) and Year 10 (16-years-old), and 1-year post-secondary school. A total of 2678 Year 8 students (74%) participated in the first wave of data collection. For the school-based surveys, attrition was <10%. Seventy-one percent of the participating Year 8 students completed the post-secondary school survey. Results Having both good school and social connectedness in Year 8 was associated with the best outcomes in later years. In contrast, participants with low school connectedness but good social connectedness were at elevated risk of anxiety/depressive symptoms (odds ratio [OR]: 1.3; 95% confidence interval [CI]: 1.0, 1.76), regular smoking (OR: 2.0; 95% CI: 1.4, 2.9), drinking (OR: 1.7; 95% CI: 1.3, 2.2), and using marijuana (OR: 2.0; 95% CI: 1.6, 2.5) in later years. The likelihood of completing school was reduced for those with either poor social connectedness, low school connectedness, or both. Conclusions Overall, young people's experiences of early secondary school and their relationships with others may continue to affect their moods, their substance use in later years, and their likelihood of completing secondary school. Having both good school connectedness and good social connectedness is associated with the best outcomes. The challenge is how to promote both school and social connectedness to best achieve these health and learning outcomes.


Objective: To determine whether value-added education is associated with lower risk of substance use among adolescents: early initiation of alcohol use (regular monthly alcohol consumption in grade 7), heavy alcohol use (>10 units per week) and regular illicit drug use. Design: Cross-sectional self-reported survey of alcohol and drug use. Analysis used two-level logistic modelling to relate schools providing value-added education with pupils' substance use. The value-added education measure was derived from educational and parenting theories proposing that schools providing appropriate support and control enhance pupil functioning. It was operationalised by comparing observed and expected examination success and truancy rates among schools. Expected examination success and truancy rates were based on schools' sociodemographic profiles. Participants: Data were collected across 15 West Midlands English school districts and included 25,789 pupils in grades 7, 9 and 11 from 166 UK secondary schools. Results: Value-added education was associated with reduced risk of early alcohol initiation (OR (95% CI) 0.87 (0.78 to 0.95)) heavy alcohol consumption (OR 0.91 (0.85 to 0.96)) and illicit drug use (OR 0.90 (0.82 to 0.98)) after adjusting for gender, grade, ethnicity, housing tenure, eligibility for free school meal, drinking with parents and neighbourhood deprivation. Conclusions: The prevalence of substance use in school is influenced by the school culture. Understanding the mechanism through which the school can add value to the educational experience of pupils may lead to effective prevention programmes.


Purpose: This systematic review examined the hypothesis that school institutional factors influence young people's use of drugs. The aims were to (1) identify the effect of school-level changes on drug use and (2) explore the possible mechanisms by which school-level influences on individual drug use might occur. Methods: Systematic review. Experimental/quasi-experimental studies of "whole-school" drug prevention interventions and longitudinal observational studies on the association between school-level and individual-level school-related exposures and drug use were
Experimental studies were included because they are the most reliable available source of evidence about causation. Observational studies of school-level and individual-level school-related exposures were included with the aim of providing evidence about a wider range of possible school-level effects and how school-level influences might be mediated by individual-level factors. Results: Experimental studies suggested that changes to the school social environment that increase student participation, improve relationships and promote a positive school ethos may be associated with reduced drug use. School-level and individual-level observational studies consistently reported that disengagement and poor teacher-student relationships were associated with drug use and other risky health behaviors. Conclusions: There is evidence of school effects on young people's drug use. Interventions that promote a positive school ethos and reduce student disaffection may be an effective complement to drug prevention interventions addressing individual knowledge, skills, and peer norms. Such approaches should now be piloted in a wider range of settings. Further research is also needed to explore mechanisms by which schools may influence young people's drug use.


Background: Despite evidence of school effects on drug use, little is known about the social and institutional processes through which these may occur. This study explores how school experiences may shape young people’s drug-related attitudes and actions and adds to existing evidence highlighting the importance of drug use in young people’s identity construction and group bonding. Methods: Case study qualitative data were collected through semi-structured interviews supplemented with observations. Fourteen students aged 14-15 were interviewed in autumn 2006 and again in summer 2007. Five teachers were interviewed. Results: Inner-city secondary schools may constitute risky and insecure environments, and thereby act as structural forces in shaping how students form peer groups and respond to feelings of insecurity. Cannabis use and identities constructed in relation to this appeared to play a key role in how students manage insecurity. Black and dual-heritage students formed large, “safe”, ethno-centric school social networks and smoking “weed” appeared to be an important source of bonding and identity. For some students, a vicious circle may exist whereby the process of “fitting in” exacerbates difficult and conflicting relationships with teachers and parents, entrenches disengagement from education and leads to further cannabis use. There also appeared to be a diffusion of this “safe” identity construction beyond these disengaged students. Cannabis and other drug use may also be an important safety strategy and source of bonding for proeducation students who need to be seen “getting high” as well as “aiming high”. While some students constructed “safe” and “sweet” identities others were constrained by their position and resources at school. Conclusion: Inner-city schools may both reflect and reproduce existing patterns of drug use. The concept of risk hierarchies may be important when designing and evaluating school-based drug-prevention strategies.


Aims: To investigate the links between the visibility of cannabis use in school (measured by teachers' reports of students being under the influence of cannabis on school premises), the proportion of cannabis users in the class, perceived availability of cannabis, as well as adolescent cannabis use. Methods: A multilevel regression model was estimated based on a Swiss national representative sample of 5,935 students in the 8th and 9th grades (mean age = 14.8, SD = 0.9) and their 343 teachers. Findings: The visibility of cannabis use in school was related to the students’ own cannabis use, even when the proportion of cannabis users in the class was taken
into account. In addition, the strength of the association between perceived availability and students’ cannabis use increased as the visibility of cannabis use in school became higher.

Conclusion: Visible cannabis use at school appears to trigger cannabis use among students, e.g. by raising the degree to which they perceive its ready availability. Teachers, school authorities, and policy-makers must assume responsibility for creating a more protective school environment, by establishing and enforcing school regulations for example.


The present study investigated whether a life skills program (LSP) for the prevention of adolescent substance misuse can have positive influences on a school context and on school bonding. The study also explored whether effects on alcohol use are mediated by positive effects on school bonding resulting from program participation. The LSP IPSY (Information + Psychosocial Competence = Protection) was implemented over a 3-year period via specially trained teachers. Analyses were based on a German evaluation study utilizing a quasi-experimental design (intervention/control) with school-wise assignment to the respective groups. Analyses were based on four measurement points (N = 952, 10 years at pre-test). Results indicated that IPSY was well implemented, highly accepted by teachers and students, and that teachers profited regarding their teaching methods. ANCOVAS revealed positive program effects on alcohol use and school bonding. Multiple regressions indicated that positive influences on school bonding following program participation partially mediated effects on alcohol use.

**Peers (6)**


Typically adolescents' friends are considered a risk factor for adolescent engagement in risk-taking. This study took a more novel approach, by examining adolescent friendship as a protective factor. In particular it investigated friends' potential to intervene to reduce risk-taking. Five-hundred-forty adolescents (mean age 13.47 years) were asked about their intention to intervene to reduce friends' alcohol, drug and alcohol-related harms and about psychosocial factors potentially associated with intervening. More than half indicated that they would intervene in friends' alcohol, drug use, alcohol-related harms and interpersonal violence. Intervening was associated with being female, having friends engage in overall less risk-taking and having greater school connectedness. The findings provide an important understanding of increasing adolescent protective behavior as a potential strategy to reduce alcohol and drug related harms.


Background: Discussions and debate about youth smoking, alcohol use, and illegal substance use (collectively referred to as youth substance use) continue to receive wide attention among researchers, policymakers, and the general public. Previous research has suggested that peer delinquency is a particularly strong correlate of youth substance use. The current study focuses on the influence of delinquent peers on substance use, and how peer delinquency influences change across age cohorts of youth. Method: The current study examines multiple correlates for youth substance use in a sample of 8,256 youth (mean age 14), with the goal of identifying the influence of delinquent peers across age cohorts while controlling for other correlates. Data was collected
from the Ohio version of the Youth Risk Behavior Surveillance System (YRBSS) developed by the Centers for Disease Control. Results: Results from multiple regression analyses identified peer delinquency as the strongest correlate of youth substance use even when other relevant factors related to family, neighborhood, and media use were controlled. Correlations between peer delinquency and substance use behavior increased across age cohorts and for individuals who first used in middle teen years (13-16) irrespective of current age. Interpretation: Age appears to be a moderating factor regarding the correlation between peer delinquency and youth substance abuse. Primary and secondary prevention and intervention strategies that focus on peers are potentially more likely to reduce youth substance use and improve peer relationships than those focused on other areas such as schools or media.


Many studies have suggested the importance of peer influence and personal attitudes (e.g., expectancies, resistance self-efficacy, and perceived harm) in predicting adolescent use of illegal substances. The present study examined these variables in relation to self-reported use of alcohol, cigarettes, and marijuana for 213 younger adolescents (12-15 years old) and 219 older adolescents (18-22 years old). A series of logistic regressions was performed to assess variables relating to use of each substance by age group and gender. Friends' use was significantly related to substance use for both age groups, both sexes, and all substances examined in this study. Perceived harm was not significantly related to use for any group. Finally, outcome expectancies and resistance self-efficacy were differentially related to use depending on age, gender, and substance. The implications of these findings for prevention programming and future research are also discussed.


This exploratory study investigates whether associations between social network measures and substance use differ according to type of substance and social context. The analyses use data obtained from 13 and 15 year olds (N = 3146) in a school-based survey and focus on three social network measures: sociometric position (e.g. group, dyad, isolate); popularity (friendship nominations received); and expansiveness (nominations made). The study aims to investigate: (i) the patterning of these social network measures by age, gender and school socioeconomic status (SES); and (ii) their relationships with substance use (current smoking, experience of drugs, alcohol in the previous week). Females and those from higher SES schools were more likely to be in groups, more popular and more expansive. Analyses including all three network measures, together with age, gender and school SES found main effects of sociometric position on smoking (lower than average rates among group members, higher than average for pupils in dyads and among isolates), of popularity on drugs and alcohol (highest levels among the most popular pupils) and of expansiveness on alcohol (highest rates among the most expansive). Interactions between the network measures, age, gender, school SES and substance use were also examined. Results are discussed concerning the use of different substances in relation to the mechanisms of selection and influence (as suggested by sociometric position, popularity and expansiveness) in differing social contexts represented by gender and school SES.

To identify and evaluate socio-psychological factors that are associated with differences in substance abuse prevalence between non-acculturated and acculturated Florida youth, t-test and logistic regression were utilized to analyze self-reported data from 63,000 middle and high school student participants in the 2004 Florida Youth Substance Abuse Survey. Questionnaire items covered socio-demographics, tobacco, alcohol, and illicit substance use; and perceptions and attitudes toward drug use. The outcome variables were past 30 day use of "any illicit drug." The key independent variable was language used at home (English/Another language). The covariates were 32 socio-psychological factors that are considered risk and protective factors for adolescent drug abuse. Findings support the growing body of evidence suggesting that acculturation status is a strong predictor of substance use among adolescents. This effect may be mediated principally through the family and peer/individual psychosocial domains. The findings may have important implications for the design and implementation of drug prevention programs targeting teenagers.


There has been significant research into the harms associated with injecting drugs and about the use of needle exchange programmes (NEPs) by adult injecting drug users (IDUs) in the United Kingdom. However, very limited research has been conducted investigating the knowledge, experiences and beliefs of IDUs under 18 years old, who due to their age are denied access to anonymous NEPs. This article reports on a small, exploratory study which examines the injecting practices of 16-19-year-old IDUs from Plymouth, UK. It investigates a range of injecting experiences, such as initiation into drug use, knowledge of harms and harm reduction strategies and the interviewees’ perception of such practices. Results are presented from five in-depth semi-structured interviews. Analysis of the data indicated that peers play a significant part in injecting, particularly in terms of initiation and acquired knowledge. Also, it appears that knowledge does not necessarily lead to behaviour change, with some young people choosing to adopt high-risk practices despite knowing the potential consequences. This supports previous study findings in relation to young people’s knowledge and associated behaviour, but also highlights the value placed on peers and their influence, particularly during the initial stages of an injecting “career”.

See also: Bahr et al., 2005 (“Parenting practices”)

Community location and socioeconomic status (4)


Social capital theory suggests that assets inherent in social relations may be used to enhance outcomes for individuals and that youth with increased access to social capital may be less likely to exhibit social and behavioral difficulties. The purpose of this secondary data analysis was to examine the relationship between social capital and substance use by high school students. Results suggest that social capital is a significant contributor to adolescent substance use where increased social capital is associated with decreased alcohol use. Opportunities for schools and communities to invest in strategies that foster the development of social capital and reduce adolescent substance use are discussed.

Background: Previous literature has shown a divergence by age in the relationship between socioeconomic status (SES) and substance use: adolescents with low SES are more likely to engage in substance use, as are adults with high SES. However, there is growing evidence that adolescents with high SES are also at high risk for substance abuse. The objective of this study is to examine this relationship longitudinally, that is, whether wealthier adolescents are more likely than those with lower SES to engage in substance use in early adulthood. Methods: The study analyzed data from the National Longitudinal Survey of Adolescent Health (AddHealth), a longitudinal, nationally-representative survey of secondary school students in the United States. Logistic regression models were analyzed examining the relationship between adolescent SES (measured by parental education and income) and substance use in adulthood, controlling for substance use in adolescence and other covariates. Results: Higher parental education is associated with higher rates of binge drinking, marijuana and cocaine use in early adulthood. Higher parental income is associated with higher rates of binge drinking and marijuana use. No statistically significant results are found for crystal methamphetamine or other drug use. Results are not sensitive to the inclusion of college attendance by young adulthood as a sensitivity analysis. However, when stratifying by race, results are consistent for white non-Hispanics, but no statistically significant results are found for non-whites. This may be a reflection of the smaller sample size of non-whites, but may also reflect that these trends are driven primarily by white non-Hispanics. Conclusions: Previous research shows numerous problems associated with substance use in young adults, including problems in school, decreased employment, increases in convictions of driving under the influence (DUI) and accidental deaths. Much of the previous literature is focused on lower SES populations. Therefore, it is possible that teachers, parents and school administrators in wealthier schools may not perceive as great to address substance abuse treatment in their schools. This study can inform teachers, parents, school administrators and program officials of the need for addressing drug abuse prevention activities to this population of students.


This study investigated differences in the development of heavy drinking and marijuana use among students in urban and rural areas and assessed whether any such differences can be accounted for by locality differences in racial/ethnic makeup, social disorganization/low social bonding, feelings of despondency and escapism, and the availability of drugs. Method: Drawn from 62 South Dakota middle schools involved in a drug prevention field trial, participating students were assigned to a locality category based on the location of their seventh-grade school. Schools in metropolitan areas were distinguished from schools in nonmetropolitan areas. Schools in nonmetropolitan areas were further distinguished into those in micropolitan (medium and large towns) and noncore (rural areas without towns and with small towns) areas. We used latent growth curve analysis to model the influence of locality on the development of heavy drinking and marijuana use from ages 13 to 19 and to determine whether differences in development across locality were attributable to location-based differences in race/ethnicity, social disorganization/bonding, feelings of despondency and escapism, and alcohol and marijuana availability. Results: Heavy drinking increased at a faster rate among youth living in micropolitan areas compared with youth living in metropolitan areas. Marijuana use increased at a faster rate among youth living in metropolitan and
micropolitan areas compared with youth living in noncore areas. Differences in the rate of change in heavy drinking were attributable to differences in the racial/ethnic composition of metropolitan and micropolitan areas. Differences in the rate of change in marijuana use were attributable to differences in residential instability and marijuana availability. Conclusions: This study underscores the diversity of drug use within rural communities, suggesting that living in a very rural area is protective against some forms of drug use but that living in a rural area that includes a medium or large town is not.


It is now common for young people in full-time compulsory education to hold part-time jobs. However, while the 1990s experienced a rise in illicit drug use particularly among young people and an increase in the level of interest in identifying factors associated with drug use, little attention has been paid to the influence of the money young people have to spend and its potential links with drug use. Four thousand five hundred and twenty-four young people living in Northern Ireland completed a questionnaire in school year 10 (aged 13/14 years). The findings suggested that there was a positive association between the amount of money young people received (and its source) and higher rates of drug use. The study concludes that money, and how it is spent by young people, may be an important factor for consideration when investigating drug use during adolescence. The findings may help inform drug prevention strategies, particularly through advice on money management, and taking responsibility for their own money.

3.4. Studies of multiple concomitant factors (9)


Examined the motivating factors that shape the decisions young people make to use drugs or alcohol. Results are presented from in-depth interviews conducted with 50 16-21 yr olds. Analysis reveal individual-level influences (the perceived functions of drug use (or specific purpose for using a particular substance), drug-related expectancies, physical/psychological state, commitments, and boundaries) and social/contextual-level influences (environment, availability, finance, friends/peers, and media) on decision-making. Of these, the perceived function for using a particular substance was identified as particularly influential.


Examined the effects of sociodemographic, family, and peer predictors on the developmental patterns of illicit drug initiation from ages 12 to 21 years. A gender-balanced, ethnically diverse urban sample of 808 children in Seattle was surveyed at age 10 in 1985 and followed prospectively to age 21 in 1996. Discrete-time survival analysis was used to assess the effects of sociodemographic, family, and peer factors on the risk of initiation. The risk for initiating illicit drug use increased steadily from ages 12 to 21. High family conflict, low family bonding, and high peers' antisocial activities predicted higher risk of initiation across this developmental period. The effect of family bonding began to decline after age 18, while the effect of peers' antisocial activities began to increase after age 15. Few gender and ethnic differences were found. Prevention programs need
to include family and peer factors as important targets. Parents should create a warm and supportive family environment with appropriate supervision and control throughout adolescence. Association with antisocial peers should be reduced, especially in high school. Interventions addressing these family and peer factors should have beneficial effects across gender and ethnic groups.


This study replicates innovative profiles of prevention among students not using substances but who may be at different risks for acquisition. Using the Transtheoretical Model constructs of Decisional Balance and Temptations, cluster analyses were performed on four independent samples of students (n = 1240) in the USA, England and Israel. For each sample, the same four distinct profiles emerged. ANOVAs indicated that the processes of prevention varied significantly across these profiles. The prevention profiles were extended to youth in Elementary, Middle, and High Schools and from a focus on single substances to multiple substances, including alcohol, tobacco, and illicit drugs. Implications for developing prevention programs are also discussed.


This study used latent class regression to identify latent trajectory classes based on individuals’ diagnostic course of substance use disorders (SUDs) from late adolescence to early adulthood as well as to examine whether several psychosocial risk factors predicted the trajectory class membership. The study sample consisted of 310 individuals originally recruited as children in a long-term prospective study. Diagnoses of alcohol or cannabis use disorders (abuse or dependence) were assessed when individuals were 18 (T1), 20 (T2), and 22 (T3) years old. The results showed that two trajectory classes were identified for both alcohol and cannabis use disorder cases and that the trajectory class membership was predicted by being male, dropping out of high school, receiving a diagnosis of CD or ODD in childhood, having an early age of onset of alcohol or cannabis use, previously using illicit drugs other than cannabis, and the number of risk factors an individual is exposed to. Prevention work should focus on the individuals exposed to these risk factors previously to decrease their likelihood of transition from drug use or single diagnosis to repeated diagnosis during the early years of emerging adulthood.


The association between high sensation-seeking, close friends' drug use and low parental monitoring with ecstasy (MDMA) use in adolescence was examined in a sample of US household-dwelling adolescents aged 12-18 years (N = 5049). We also tested whether associations were of stronger magnitude than associations between these correlates and marijuana or alcohol/tobacco use in adolescence. Data from Round 2 of the National Survey of Parents and Youth (NSPY) Restricted Use Files (RUF) was analyzed via Jackknife weighted multinomial logistic regression models. High sensation-seekers were more likely to be ecstasy, marijuana, and alcohol/tobacco users, respectively, as compared to low sensation-seekers. High sensation-seeking and close friends' drug use were more strongly associated with ecstasy as compared to marijuana and
alcohol/tobacco use. Low parental monitoring was associated with marijuana use and alcohol/tobacco use and there was a trend for it to be associated with ecstasy use. Ecstasy use is strongly associated with peer drug use and more modestly associated with high sensation-seeking. School prevention programs should target high-sensation-seeking adolescents and also encourage them to affiliate with non-drug using peers.


The concept of risk, and its centrality to social life, is theoretically much discussed within late modernity. This paper examines young people's drug use and their drug transitions within a framework of risk drawing on findings from a longitudinal ethnographic study of drug use among young people in a Dublin inner-city community. Fifty-seven young people aged between 15 and 19 years, including non-users, recreational, and problematic drug users, were recruited into the study in 1998. Contact was re-established with 42 of the study's participants in 2001. Individual interviews and focus group discussions, supported by prolonged participation within the study site, were the primary methods of data collection. Drawing on the young people's situated accounts of their drug-taking events, routines, and practices across time, the findings highlight the complex social negotiations involved in the construction of drug journeys. Analyses of change in drug use behaviour over the study period demonstrate that drug transitions unfold alongside dynamic and changing perceptions of safety and risk. Responses to 'risk' within youth drug scenes were contextually shaped, open to situational revision over time, and, in many instances, drug taking was habitual, not calculated. Put differently, young people 'script' risk as they gain experience in the world. The type of calculus involved in the making of drug journeys is fluid and relational, socially contingent rather than static, and subject, at times, to constrained agency linked to social and economic marginalization. It is argued that models of risk that rely on individualistic and rationalistic assumptions struggle to accommodate the fluidity and contradiction that characterizes much drug use. Implications for strategies and initiatives aimed at reducing drug-related harm are discussed.


This article reports findings from a national longitudinal cross-site evaluation of high-risk youth to clarify the relationships between risk and protective factors and substance use. Using structural equation modeling, baseline data on 10,473 youth between the ages of 9 and 18 in 48 high-risk communities around the nation are analyzed. Youth were assessed on substance use (cigarette, alcohol, and marijuana use), external risk factors including family, school, peer and neighborhood influences, and individual risk and protective factors including self-control, family connectedness, and school connectedness. Findings indicate strong direct relationships between peer and parental substance use norms and substance use. Individual protective factors, particularly family and school connectedness were strong mediators of individual substance use. These findings suggest that multi-dimensional prevention programming stressing the fostering of conventional anti-substance use attitudes among parents and peers, the importance of parental supervision, and development of strong connections between youth and their family, peers, and school may be most effective in preventing and reducing substance use patterns among high-risk youth.
Drug prevention has traditionally focused on influencing individual attitudes and behaviours. In particular, efforts have been directed towards adolescents in the school setting. However, evaluations of school-based drug education have identified limited success. There is increasing recognition that drug abuse is one of a number of risk behaviours, including truancy, delinquency and mental health problems, which share common antecedents that begin in the early years of childhood. Furthermore, these behaviours are shaped by macroenvironmental influences including the economic, social, cultural, and physical environment. Drug prevention needs to adopt a broader perspective: with greater collaboration in related programmes such as crime prevention and suicide prevention; with greater attention to the macroenvironmental influences on problem behaviours; and with greater attention to healthy development in the first years of childhood.


Although many studies have examined the predictors of overall substance use among adolescents, few have focused on the high school setting as a specific context for substance use. Therefore, predictors of alcohol and marijuana use at school were examined in a sample of high school students. The general hypotheses were that substance use at school depends on (a) personal predispositions, (b) the situational opportunity for substance use at school, and (c) the interaction of predispositions and opportunity. Several interactions were found suggesting that personal predispositions are more strongly related to substance use at school when students believe they have the opportunity to use alcohol and drugs without getting caught.
Part IV: Research and Evaluation Methods
4.1. Current issues in substance use prevention research


The problems associated with the use of alcohol, tobacco, and other drugs (ATOD) extract a significant health, social, and economic toll on American society. While the field of substance abuse prevention has made great strides during the past decade, two major challenges remain. First, the field has been disorganized and fragmented with respect to its research and prevention practices; that is, there are often separate ATOD prevention "specialists." Second, both the prevention researchers who test the efficacy of specific prevention strategies and the practitioners who implement prevention efforts often lack an overall perspective to guide strategy selection. To address these limitations, an ATOD causal model is presented that seeks to identify those variables (Domains) that are theoretically salient and empirically connected across alcohol, tobacco, and illicit drugs. For the researcher, the model demonstrates important commonalities, as well as gaps, in the literature. For the practitioner, the model is a means to recognize both the complexity of the community system that produces ATOD problems and the multiple intervention points that are possible within this system. Researchers and practitioners are thus challenged to work synergistically to find effective and cost-effective approaches to change or reduce ATOD use and associated problems.
There has been tremendous growth in the field of prevention science over the past two decades. The defining features of contemporary prevention science are high quality empirical research using rigorous and well-established scientific methods, careful hypothesis testing, and the systematic accumulation of knowledge. One area where substantial progress has been made is in the understanding of the etiology and prevention of tobacco, alcohol, and illicit drug abuse. In this paper, the authors review the growth in prevention as a scientific enterprise, discuss advances in drug abuse prevention research, and review the effectiveness of one approach to the problem of adolescent drug abuse, the Life Skills Training (LST) program, and the methodological strengths of the LST evaluation research. In addition, the authors provide a response to criticism regarding two types of data analysis in evaluation research—indeed particular to D. M. Gorman's comments (see record 2006-04207-003) on the current authors' LST research, and show that these data analyses can help address a number of important research questions with implications for theory and practice. First, the analysis of high-fidelity subsamples can address research questions about the importance of program implementation fidelity; and second, composite measures of concurrent tobacco, alcohol, and marijuana use (i.e., polydrug use) are useful in testing research questions about program effects on more serious levels of drug involvement. With an increasing number of randomized controlled trials underway, the field of prevention science is contributing to a new generation of evidence-based approaches and policies that, if widely utilized, offer the potential of reducing the mortality and morbidity associated with a number of major health and social problems.


Two evidence-based interventions, Life Skills Training and TimeWise, were combined in an effectiveness trial. Participants were predominately African American youth (N = 715; M[sub]age[/sub] = 12). The study authors provide an empirical demonstration of the implications of incorporating dosage information in intervention outcome analyses. Study results showed no program-related benefits for drug use. Results indicated intervention-related benefits for assertiveness and anxiety management skills and drug use intentions as well as a reduction in detrimental leisure motivations. High program exposure and lesson coverage tended to be connected to intervention benefits. Study findings also documented ways that dosage information provides insight into interventions and their effects.


Ever increasing demands for accountability, together with the proliferation of lists of evidence-based prevention programs and policies, led the Society for Prevention Research to charge a committee with establishing standards for identifying effective prevention programs and policies. Recognizing that interventions that are effective and ready for dissemination are a subset of effective programs and policies, and that effective programs and policies are a subset of efficacious interventions, SPR's Standards Committee developed overlapping sets of standards. These Standards were designed to assist practitioners, policy makers, and administrators to determine which interventions are efficacious, which are effective, and which are ready for dissemination. Under these Standards, an efficacious intervention will have been tested in at least two rigorous...
trials that (1) involved defined samples from defined populations, (2) used psychometrically sound measures and data collection procedures; (3) analyzed their data with rigorous statistical approaches; (4) showed consistent positive effects (without serious iatrogenic effects); and (5) reported at least one significant long-term follow-up. An effective intervention under these Standards will not only meet all standards for efficacious interventions, but also will have (1) manuals, appropriate training, and technical support available to allow third parties to adopt and implement the intervention; (2) been evaluated under real-world conditions in studies that included sound measurement of the level of implementation and engagement of the target audience (in both the intervention and control conditions); (3) indicated the practical importance of intervention outcome effects; and (4) clearly demonstrated to whom intervention findings can be generalized. An intervention recognized as ready for broad dissemination under these Standards will not only meet all standards for efficacious and effective interventions, but will also provide (1) evidence of the ability to "go to scale"; (2) clear cost information; and (3) monitoring and evaluation tools so that adopting agencies can monitor or evaluate how well the intervention works in their settings. Finally, the Standards Committee identified possible standards desirable for current and future areas of prevention science as the field develops. If successful, these Standards will inform efforts in the field to find prevention programs and policies that are of proven efficacy, effectiveness, or readiness for adoption and will guide prevention scientists as they seek to discover, research, and bring to the field new prevention programs and policies.


In an effort to promote evidence-based practice, government officials, researchers, and program developers have developed lists of model programs in the prevention field. This article reviews the evidence used by seven best-practice lists to select five model prevention programs. The authors’ examination of this research raises questions about the process used to identify and publicize programs as successful. They found limited evidence showing substantial impact on drug use behavior at posttest, with very few studies showing substantial impact at longer follow-ups. The authors advocate additional long-term follow-up studies and conclude by suggesting changes in the procedures for developing best-practice lists.


Prevention research concerning alcohol, tobacco and other drugs faces a number of challenges as the scientific foundation is strengthened for the future. Seven issues which the prevention research field should address are discussed: lack of transparency in analyses of prevention program outcomes, lack of disclosure of copyright and potential for profit/income during publication, post-hoc outcome variable selection and reporting only outcomes which show positive and statistical significance at any follow-up point, tendency to evaluate statistical significance only rather than practical significance as well, problem of selection bias in terms of selecting subjects and limited generalizability, the need for confirmation of outcomes in which only self-report data are used and selection of appropriate statistical distributions in conducting significance testing. In order to establish a solid scientific base for alcohol, tobacco and drug prevention, this paper calls for discussions, disclosures and debates about the above issues (and others) as essential. In summary, the best approach is always transparency.
Percy and colleagues report that 17% of participants reporting cannabis use at recruitment to a large prospective study later denied that they had ever used cannabis. 'Recanting' of reports of use of most other illicit drugs was even higher and the strongest predictor of recanting was interim exposure to drugs education. The authors agree with the suggestion of Fendrich that this casts doubt on the strength of evidence for the effectiveness of most drug prevention interventions. But what these data illustrate is reporting bias, and this has wider implications for epidemiological studies on correlates of illicit drug use—particularly studies on cannabis, usually the only illicit drug whose use is common enough in general population samples for effects to be estimated. Reporting of drug use will be influenced by perceptions of social desirability. Reporting bias can also generate apparently strong and robust effects. What is needed are objective measures—mainly of drug use but also, where possible, of the outcomes drug use may be related to. These measures should be collected alongside self-reports so that effects suggested by both can be compared. Thus, as long as one remains unable to discount the influence of reporting bias on the available evidence of the causes and consequences of illicit drug use the meaning of much of this evidence will remain uncertain.


This study examines the reliability and validity of the Youth Support Inventory, a tool designed for community coalitions to assess the availability of local resources and supports that previous research indicates are important for preventing adolescent alcohol and other drug use. Citizen members in 17 community coalitions completed the inventory. In tests of validity, a higher score (i.e., more community support) was associated with less adolescent alcohol use. In tests of reliability, the inventory was reduced from 55 to 40 items. Of the prevention strategies identified by the coalition, 94% addressed resources the local assessment indicated were not extensively available in the community.


Aims: To assess the reliability of drug use reports by young respondents, this study examined the extent of recanting previous drug use reports within an ongoing longitudinal survey of adolescent drug use. Here, recanting was defined as a positive report of life-time drug use that was subsequently denied 1 year later. The covariates of recanting were also studied. Design: An ongoing longitudinal survey of young adolescents (Belfast Youth Development Study) in Northern Ireland. Setting: Pencil and paper questionnaires were administered to pupils within participating schools. Measurements: Measures analysed included (a) recanting rates across 13 substances, (b) educational characteristics, (c) offending behaviour and (d) socioeconomic status. Findings: High levels of drug use recanting were identified, ranging from 7% of past alcohol use to 87% of past magic mushroom use. Recanting increased with the social stigma of the substance used. Denying past alcohol use was associated with being male, attending a catholic school, having positive attitudes towards school, having negative education expectations and not reporting any offending behaviour. Recanting alcohol intoxication was associated with being male and not reporting serious offending behaviour. Cannabis recanting was associated with having negative education expectations, receiving drugs education and not reporting serious offending behaviour.
Conclusions: The high levels of recanting uncovered cast doubts on the reliability of drug use reports from young adolescents. Failure to address this response error may lead to biased prevalence estimates, particularly within school surveys and drug education evaluation trials.


The National Cross-Site Evaluation is a large multisite evaluation (MSB) of 48 substance abuse prevention programs, 5,934 youth participating in programs, and 4,539 comparison youth programs. Data included a self-report questionnaire administered at 4 points in time, detailed dosage data on over 217,000 program contacts, and detailed site visit information. In a pooled analysis, the programs did not demonstrate significant positive effects on a composite outcome measure of tobacco, alcohol, and marijuana use in the previous 30 days. However, disaggregated analyses indicated that 1) sites in which comparison groups had strong opportunity to participate in prevention programs suppressed observed effects; 2) youth who had already started using before they entered programs reduced use significantly more than comparison youth who had started using; and 3) both males and females who participated in programs significantly reduced use relative to comparisons, but in very different patterns. Combining these patterns produced an apparent null effect. Finally, programs that incorporated at least 4 out of 5 effective intervention characteristics identified in the study significantly reduced use for both males and females relative to comparison youth. The lessons produced by this study attest to the value of MSB designs as a source of applicable knowledge about prevention interventions.

4.2. Effective strategies for measuring youth behaviour


Despite mentoring’s rapidly increasing popularity as an intervention for the prevention of teen alcohol and drug abuse and associated problems, there is little research consensus on its overall effectiveness or on the core principles and components that define effective mentoring. To advance knowledge concerning this important prevention intervention, the Center for Substance Abuse Prevention has designed and funded a multi-site cooperative agreement involving seven mentoring programs. The programs are designed to provide a rigorous outcome evaluation that allows comparisons of differing approaches to organizing and delivering mentoring services to adolescents at high risk for substance abuse. The cooperative agreement guidelines set service parameters and options that focus on issues that are grounded in past research on mentoring prevention interventions. The cooperative agreement includes a quasi-experimental, longitudinal multi-site evaluation that provides evidence-based recommendations to advance the effective use of mentoring as a prevention strategy.

The Ohio Substance Abuse Monitoring Network (OSAM) is designed to provide accurate, timely, qualitatively-oriented epidemiologic descriptions of substance abuse trends and emerging problems in the state’s major urban and rural areas. Use of qualitative methods in identifying and assessing substance abuse practices in local communities is one of the main assets of OSAM Network. Qualitative methods are sensitive to local contextual variability, flexible enough to capture emergent trends, and can be implemented with limited financial resources. This paper describes how qualitative epidemiologic methods, like those used by the OSAM Network, could be applied to inform substance abuse prevention activities, particularly those directed at adolescents.


Considerable research suggests that social influences-based drug abuse prevention programming has produced the most consistently successful preventive effects. However, a common criticism of this literature is that most prevention intervention studies rely solely on self-reported substance use. The purpose of this study was to assess the effects of normative education, arguably the most successful component of social influence based prevention programs, on alcohol and cigarette consumption using both self- and reciprocal best friend reports of substance use. Analyses of subsamples of data from 11,995 8th-, 9th-, and 10th-grade students participating in the Adolescent Alcohol Prevention Trial showed that normative education significantly delayed the onset of alcohol use across the 8th, 9th, and 10th grades among public school students. A similar but somewhat less robust pattern was found for cigarette use. These results suggest that self-report bias does not account for previous findings and demonstrate rather convincingly that normative education is an effective drug prevention strategy for public school settings.


The purpose of this article is to set forth an innovative methodological protocol for culturally grounding interventions with high-risk youths in alternative schools. This study used mixed methods to evaluate original and adapted versions of a culturally grounded substance abuse prevention program. The qualitative and quantitative methods concurrently explore behaviors around drugs and alcohol, contextual variables for youth substance abuse and related factors, cultural perspectives regarding drug-related attitudes and behaviors, and the complex reasons behind students’ substance use choices. Although questionnaires were used to note demographics, cultural and acculturative variables, drug use, drug and alcohol attitudes and expectancies, and school culture variables, focus groups capture the voices of the students and staff and trends that cannot be fully understood through questionnaires. In this study, focus groups aid in the understanding of student drug and alcohol choices, attitudes, and behaviors and help the researchers hone in on questions and necessary changes to future research procedures.

Background: Some groups of young people are considered difficult to reach and study. One such group consists of adolescents with emotional and behavioral disorders (EBD), who have problems with verbal intelligence, thought focusing and paying attention. During a 2-year research study into the preferences of adolescents with EBD regarding drug prevention policy, the author examined these young people’s opinions and their experience of participation in research. Methods: A qualitative, youth-centred method was used, combining group techniques (focus groups, nominal group techniques and feedback sessions) and involving 160 adolescents, aged 12-21 years, with EBD, living in residential settings of the disability sector. Results: It is possible to carry out qualitative research with young people with EBD. This population is very vulnerable, negatively influenced by their previous experiences and by the social group that they belong to. They have an aversion to 'being studied', and their self-esteem and confidence are low. However, it is possible to build up trust. Conclusions: It has become clear that there is no reason for excluding adolescents with EBD from participation in research. Research is possible and successful, providing sufficient effort is put into building up trust with these emotionally scarred young people.


This study illustrates a method to evaluate mediational mechanisms in a longitudinal prevention trial, the Aban Aya Youth Project (AAYP). In previous studies, interventions of AAYP were found to be effective in reducing the growth of violence, substance use and unsafe sex among African American adolescents. In this article, it is hypothesized that the effects of the interventions in reducing the growth of substance use behavior were achieved through their effects in changing intermediate processes such as behavioral intentions, attitudes toward the behavior, estimates of peers' behaviors, best friends' behaviors, and peer group pressure. In evaluating these mediational mechanisms, difficulties arise because the growth trajectories of the substance use outcome variable and some of the mediating variables were curvilinear. In addition, all of the multivariate mediational measures had planned missing data so that a score from the multiple items for a mediator could not be formed easily. In this article, a latent growth modeling (LGM) approach is introduced; namely, a two-domain LGM mediation model, in which the growth curves of the outcome and the mediator are simultaneously modeled and the mediation effects are evaluated. Results showed that the AAYP intervention effects on adolescent drug use were mediated by normative beliefs of prevalence estimates, friends’ drug use behavior, perceived friends’ encouragement to use, and attitudes toward the behavior.


Evaluation research mixes administrative objectives with social scientific aims. This article distinguishes between three types of evaluation research based on the role of the evaluator. First, social engineers seek mechanisms that have objectively measurable outcomes. Second, programme promoters act as counselling resources for community developers or other stakeholders. Instead of these two traditional roles, this article considers a third type of evaluation which is based on the role of the evaluator as a critical interpreter, embodied in the sociological intervention approach. The role of the critical interpreter is illustrated by two cases where evaluation has focused on the policy of devolved responsibility combined with community-based
prevention. The interventions took place in very different settings: a large-scale, long-lasting evaluation of a large and expensive policy-testing programme and an independent, voluntary and brief evaluation of small-scale, local groups. The comparison of these demonstrates that the context of evaluation determines the more specific type of a critical interpretation.
Part V: Measures for Use in Research and Evaluation
Part V: Measures for Use in Research and Evaluation

Overview

The following is a compendium of measures that can be used in the evaluation or research of child and youth programs, services, and supports. These measures support a resiliency model, i.e., examining strengths or protective factors and risk factors.

Measures are organized into two sections:

Section One: Compendiums of Measures. Includes documents that have been compiled which contain numerous measures for use in research and evaluation.

Section Two: Multi-Dimensional Measures. Outlines single measures yet within each measure, there exists two or more subscales.

Some measures are copyrighted and therefore must be purchased OR permission of the author must be obtained prior to use; other measures are not copyrighted and therefore can be used in evaluation and research.

In some cases the evaluator/researcher should contact the author of the measure before using in an evaluation. In these instances email addresses of the authors have been provided.

To view measures and any accompanying documents, please see accompanying files (e.g., ‘Section One_Compendium of Measures’). Measures are listed in each section file by letter and then name (e.g., A-The Hemingway). In some cases websites are provided where more information can be found beyond what is available in each file (e.g., research papers etc).
Section One: Compendiums of Measures


Various authors

This 373 page compendium provides “researchers and prevention specialists with a set of tools to assess violence-related beliefs, behaviors, and influences, as well as to evaluate programs to prevent youth violence. If you are new to the field of youth violence prevention and unfamiliar with available measures, you may find this compendium to be particularly useful. If you are an experienced researcher, this compendium may serve as a resource to identify additional measures to assess the factors associated with violence among youths. Although this compendium contains more than 170 measures, it is not an exhaustive listing of available measures. A few of the more widely used measures to assess aggression in children, for example, are copyrighted and could not be included here. Other measures being used in the field, but not known to the authors, are also not included.” (From Compendium introduction)

Measures are organized into 4 assessment topics:

1. **Attitudes and beliefs** (aggression/delinquency; couple violence; education and school; employment; gang; gender roles; guns; and television)
2. **Psychosocial and cognitive** (aggressive fantasies; attachment to role models; attributional bias; depression; emotional or psychological distress; ethnic identity; fatalism; future aspirations; hopelessness; hostility; moral reasoning; perceived likelihood of involvement in violence and other problem behaviors; perceptions of self; personal safety; responsibility and citizenship; self-efficacy, impulse control; desire of control, and coping; self-esteem; sense of caring and support; and social consciousness)
3. **Behaviour** (aggressive and violent behaviour; concentration; conflict resolution skills; dating violence; delinquent and disciplinary behaviour; drug and alcohol use; exposure to gangs; handgun access; impulsivity; leisure activity; parental control; safety and threats; social competence; social problem solving skills; victimization; weapon carrying)
4. **Environment** (disciplinary practices; family communication; family conflict and hostility; family relationships; parent-child relationships; parental attitudes toward antisocial behaviour and aggression; parental involvement; parental monitoring and supervision; quality of life; collective efficacy; community involvement; community resources; exposure to violence; fear of crime; neighbourhood cohesion; neighbourhood disorganization; neighbourhood integration and exchange; neighbourhood satisfaction; and social control).

B. Ansell-Casey Life Skills Assessment (ACLSA)

Casey Family Programs

Casey Family Programs (Casey) from 1994-2000 developed a tool for use by the child welfare field to assess life skills. Readiness Four levels of the ACLSA were created for youth ages 8-10 (I), 11-14 (II), 15-18 (III), and 19 and older (IV). There are also corresponding caregiver and special population assessment tools. In addition, a short form was developed for youth ages 11-18 to be used as a high level screening and/or research tool. The purpose of all five assessments is to indicate life skills mastery across several domains (e.g., daily life tasks; self-care; social development; work and study skills; money management; housing and community; and resources). The measures provide an indication of skill level and readiness for living on one’s own. Please see manual for a complete overview. For more information about Casey Family Program, please visit: http://www.casey.org/
C. Social-Emotional Learning Assessment Measures for Middle School Youth
Social Development Research Group, University of Washington

Based on a review of 73 measures, the Social Development Research Group recommends 10 measures for examining social-emotional learning in youth. Most measures are used for youth up to grade 12 (ages are outlined for each measure). Three of the ten are free while the other seven must be purchased for use.

- ASEBA: Child Behavior Checklist (CBCL), Teacher Report Form (TRF), and Youth Self-Report (YSR)
- Communities That Care (CTC) Survey (Free)
- The Comprehensive School Climate Inventory (CSCI)
- Developmental Assets Profile (DAP)
- Devereux Student Strengths Assessment (DESSA)
- School Social Behaviors Scale, Second Edition (SSBS-2)
- Social Skills Improvement System Rating Scales (SSIS-Rating Scale)
- Strengths and Difficulties Questionnaire (SDQ) (FREE – Go to online link-Available in multiple languages)
- Washington State Healthy Youth Survey (HYS) (FREE)

This report outlines their criteria for choosing the above measures, information about each measure and contact information (permission to use or purchase price) for each measure.

D. Identifying Indicators and Tools for Measuring Social and Emotional Healthy Living
Schonert-Reichl, K. A., Stewart Lawlor, M., Oberle, E., & Thomson, K.

This report synthesizes key information in the field of social and emotional health. Within the document are links to organizations that have measures available on their websites. Copies of the tools, information regarding target ages and psychometric properties of the following measures are outlined in the document.
Section Two: Multi-Dimensional Measures

A. The Hemingway: Measure of Adolescent Connectedness
(Child and Adolescent Version)
Karter, M. J.
For access email Michael Karter: michael.karter@utsa.edu

“The 78 item Measure of Adolescent Connectedness, version 5full, has fifteen subscales, including connectedness to religion, romantic partners, mother, father, and kids from other cultures. The second version is the 57 item Adolescent, version 5short. The short version does not include those extra fives scales, which some schools have preferred to not include in their surveys (fearing parents would not like to have their children asked about religion, dating, race, or about each parent specifically). Otherwise the two scales are the same. The items in the measure were empirically derived. These scales are currently undergoing a national norming to establish base rates for youth across grades, sexes, and ethnic groups; therefore, only basic information on subscale reliability is presented in this manual. Information from studies describing the development of the scale and the factor. The 78 item Measure of Adolescent Connectedness, version 5full, has fifteen subscales, including connectedness to religion, romantic partners, mother, father, and kids from other cultures. The second version is the 57 item Adolescent, version 5 short. The short version does not include those extra fives scales, which some schools have preferred to not include in their surveys (fearing parents would not like to have their children asked about religion, dating, race, or about each parent specifically). Otherwise the two scales are the same. The items in the measure were empirically derived. These scales are currently undergoing a national norming to establish base rates for youth across grades, sexes, and ethnic groups; therefore, only basic information on subscale reliability is presented in this manual. Information from studies describing the development of the scale and the factor. “

(Information from Manual introduction)
Please visit: http://adolescentconnectedness.com/survey.php to view surveys in Chinese, French and Spanish as well as more information on reporting.
B. The ROPELOC: Review of Personal Effectiveness and Locus of Control
Richards, G. E., Ellis, L., & Neill, J. T.
For access email James Neill: jamestneill@gmail.com

The ROPELOC instrument originally developed by Richards over 10 years and then by Richards and Neill over a further 7 years has been further developed to tap into key actions and behaviours that indicate a person’s effectiveness in a variety of critical areas of life. The new ROPELOC instrument has grown out of testing on over 10,000 training program participants in a wide variety of program types. The ROPELOC items are grounded in self-perceptions but expressed and interpreted in terms of behaviours.

Other, often popular, measures which purport to measure multiple dimensions, have been found wanting, are insensitive to change, unreliable or have poor psychometrics. The ROPELOC overcomes these shortcomings and provides a short, easily administered useful multidimensional instrument with sound psychometric properties.

The ROPELOC has 14 scales; including personal abilities and beliefs (Self-Confidence, Self-Efficacy, Stress Management, Open Thinking), social abilities (Social Effectiveness, Cooperative Teamwork, Leadership Ability), organisational skills (Time Management, Quality Seeking, Coping with Change) an energyscale called Active Involvement and a measure of overall effectiveness in all aspects of life. In addition, the instrument has an in-built Control Scale that helps to determine whether changes reported in the other scales are due to program effects or simply due to retesting on the same instrument. The two Locus of Control scales measure the tendency to take responsibility for self-actions and successes.

Two different samples of high school students were used to trial the new ROPELOC. The first trial sample (n= 1250) had internal reliabilities (Cronbach alpha) for its 14 subscales of between .79 and .93 and an average internal reliability of .85 and an overall alpha of .96. In the second trial sample (n= 1475) the internal reliabilities ranged between .71 and .90 (mean= .83) for younger students aged 11-13 yrs and between .73 and .91 (mean=.84) for older students aged 14-16 yrs. The average inter-scale correlations was .43 (highest correlation = .62) indicating good discrimination between the closely allied dimensions of life effectiveness as measured by the ROPELOC.
(From: http://wilderdom.com/abstracts/RichardsEllisNeill2002ROPELOCComprehensiveInstrumentReviewingPersonalEffectiveness.htm)

C. Life Effectiveness Questionnaire (LEQ-H)
Richards, G. & Neill, J.
For access email James Neill: jamestneill@gmail.com

Originally designed to measure the effectiveness of outdoor and adventure education programs among youth (has been used with children as young as 10 and through to college age), LEQ is a 24-item self-report instrument which assesses eight distinct scales: Time Management, Social Competence, Achievement Motivation, Intellectual Flexibility, Task Leadership, Emotional Control, Active Initiative, and Self-Confidence. Please see conditions of use at: http://wilderdom.com/wiki/LEQ:Conditions_of_use
D. “People in My Life” (PIML): A Self-Report Measure of Attachment in Late Childhood
Ridenour, T. A., Greenberg, M. T., & Cook, E.
For access email Ty Ridenour: tar27@pitt.edu

A measure of attachment for middle childhood in four areas: parents/caregivers; friends, school and neighbourhood. Parent Factors: Trust, communication, alienation; Friend factors: Trust, communication, alienation/dissatisfaction with friends, delinquency; School Factors: affiliation/bonding, school bonding, teacher affiliation, dissatisfaction with teacher, school dangerousness; Neighbourhood factors: positive neighbourhood, neighbourhood dangerousness.

E. Skills for Everyday Living
Penn State and Purdue Universities

Measures designed to assess 5 areas in the youth development: communication, goal setting, decision-making, critical thinking skills and problem-solving. For more information and background, please see: http://www.humanserviceresearch.com/youthlifeskillsevaluation/evaltools1218.htm
Other Documents of Interest

Arts Programs to Reduce Delinquent Behaviour


Researchers report that the number of child delinquents between the ages of seven and twelve being seen in the juvenile court systems has increased 33 percent over the last decade. Research shows that a number of well-designed prevention programs have become a viable option and popular way for communities to address the developmental needs of youths during the times that are often associated with delinquent behavior. Prevention programs designed with a cultural arts format have received tremendous interest, support, and financial funding from federal and local agencies, corporate donors, and other private parties, as they have demonstrated the ability to support at-risk youths in acquiring adaptive social, vocational, and emotional skills that foster self-esteem, self-efficacy, and reduced interest in committing crimes. This article evaluates cultural arts programs designed to serve at-risk youths in developing adaptive social, emotional, behavioral, and artistic skills. Most of the programs are based on a framework of best practices for positive youth development and/or youth violence prevention philosophy.

Canadian Update on Level of Substance Use among Youth


The article presents the findings of different studies regarding the alcohol and drug use among teenagers in Canada. It mentions about a survey that shows alcohol is the most commonly used substance among teenagers in which 1 out of 5 young adults drinks in a way that may put them at risk. Furthermore, another report indicates that some youth are at greater risk than others of having drug or alcohol problems. Meanwhile, the article also provides information on how to detect a teenager if he is using drugs.

GLBT2SQ


Psychological Well-Being of Youth


Research examining the relationship between social support and psychological well-being has largely ignored the negative side of social interactions. However, empirical evidence suggests that negative interactions can potentially be more harmful than social support is helpful. This article critically reviews the literature investigating the relationship between social support and negative social interactions and their simultaneous effect on psychological well-being. A review of 28 studies revealed that there are conceptual, theoretical, and methodological limitations associated with this body of research. In order to unravel some of these limitations, studies are grouped according to three conceptual models: the additive effects model, the moderator model, and the domain specific model. Finally, the article discusses directions social work practice research should take to tackle and fully appreciate the complexities of the relationship between social support and psychological well-being.


This study investigated whether participation in structured after-school activities moderates the association between detached parent–adolescent relationships and adolescent depressed mood. A representative sample of 539 14-year-olds and their parents were assessed concerning adolescent participation in after-school activities, the parent–adolescent relationship, and adolescent depressed mood. Results showed that adolescents with detached relations to their parents reported high levels of depressed mood. Adolescents who participated in after-school activities reported low levels of depressed mood compared to adolescents not participating in such activities; however, this was primarily true of participants who perceived high support from their activity leader. Support from after-school activity leaders was particularly important for a subgroup of youth characterized by highly detached relations to their parents. Although girls reported higher levels of depressed mood than did boys, the associated benefits of perceived support from an activity leader were consistent across gender.

The Search Institute


“Search Institute® is an independent, nonprofit, nonsectarian organization committed to helping create healthy communities for every young person. Because we believe that “all kids are our kids,” we create books and other materials that welcome and respect people of all races, ethnicities, cultures, genders, religions, economic backgrounds, sexual orientations, and abilities. Our Mission: To provide leadership, knowledge, and resources to promote healthy children, youth, and communities.”

http://www.search-institute.org
Key Journals for Consultation in the Area of Substance Use Prevention

- Addiction
- Journal of Primary Prevention
- Drug and Alcohol Review
- Journal of Community Psychology
- Health Education
- Drugs: Education, Prevention, Policy
- Prevention Science
- Evaluation Review
# Program Index

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