History of Preventive Drug Education¹

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ABSTRACT

The issue of drug abuse has already been with us for a very long time. Knowing the adverse effects of drug abuse in a society’s culture and general well-being, many measures have been proposed and implemented by experts in order to reduce and mitigate, if not totally eradicate, these effects. One such measure is drug prevention education. This paper traces the development of drug prevention education programmes, with special emphasis on the theoretical bases and pedagogical approaches adopted by these programmes. In addition, the development of drug prevention education programmes in selected ASEAN member-states and other countries are briefly described. Finally, this paper attempts to provide a glimpse of the direction that preventive drug education is headed to based on recent developments in the fields of education, medicine, and the social sciences.

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I. Introduction

The use of drugs in order to alter the physiological and psychological functioning in an individual has had a long history. Cannabis was grown in China for medicinal purposes as early as 4000 BC while the Incan civilization in South America was known to have worshipped cocaine (Isralowitz, 2004). Other drugs such as heroin and amphetamines have a more recent history. The production, sale, and use of illicit drugs remain to be a global problem a full century after the first drug control meeting in Shanghai, China (UNODC, 2009).

The adverse effects of drug use to society, in general, and to the individual, in particular, are well-known and widely documented in the scientific literature. For example, a few studies have established a positive relationship between drug use and crime and violence, although the precise role of drugs is less clear (e.g. Corman & Mocan, 2000; Fagan, 1993; Goldstein, 1985). At the individual level, drug abuse affects one’s physical, psychological, and social well-being (e.g. Choi & Pearl, 1989; Jackson et al., 2006; Volkow, 2004). Drug abuse is also a serious economic burden to the State because of the staggering costs (health care, productivity loss, crime, etc.) associated with drug abuse (Cartwright, 1999).

It is often said that an ounce of prevention is worth a pound of cure. In addition, many treatment modalities are expensive, labor-intensive, and plagued by high rates of recidivism (Botvin & Griffin, 2005). It is primarily for these reasons that the prevention aspect of the drug abuse problem is emphasized and advocated by many experts. Put simply, prevention offers a logical alternative to treatment.

Botvin and Griffin (2005) classify prevention approaches into five categories, namely information dissemination, affective education approaches, alternatives approaches, social resistance skills approaches, and competency enhancement approaches. Preventive drug education programmes use one or a combination of the aforementioned approaches.

This paper traces the development of drug prevention education programmes, with special emphasis on the theoretical bases and pedagogical approaches adopted by these programmes. In addition, the development of preventive drug education programmes in selected ASEAN member-states and other countries are briefly described. Finally, this paper attempts to provide a glimpse of the direction that preventive drug education is headed to based on recent developments in the fields of education, medicine, and the social sciences.

II. History of preventive drug education

Different human cultures have engaged in non-medical drug use to stimulate, sedate, or elate since pre-historic times (Escohotado, 1999). The problem of drug abuse, however, is a relatively recent phenomenon in comparison. It follows that preventive
drug education is also recent compared to other subjects such as mathematics, science, and history. Horan (1974) stated that the purpose of drug education was threefold, namely to (1) increase knowledge about drugs, (2) promote healthy attitudes toward the use of drugs, and (3) decrease (potential) drug abuse behavior in the general population. However, he was also the first to concede that this statement was fraught with conceptual and empirical problems, as the history of drug education, briefly described in the succeeding paragraphs, would bear out.

An early form of drug education could be traced in the 1880s when so-called temperance groups such as the Women’s Christian Temperance Union (WCTU) associated many societal problems to alcohol consumption and its legal status and, thus, to further their anti-alcohol advocacy, they developed teaching materials (named ‘Scientific Temperance Instruction’) for implementation in schools in North America (Tupper, 2008a; Tupper, 2008b). Although alcohol was the main focus of WCTU’s efforts, they also condemned tobacco, opium and other drug use and advocated abstinence from all mind-altering substances (WCTU, no date). As WCTU is a moral crusader, it sees drug use as a moral issue and their users as wicked and deserving punishment (Marlatt, 1996).

The ‘Scientific Temperance Instruction’ movement eventually lost public and political support and its use in schools declined by the 1920s. In 1926, the United States hosted the first World Conference on Narcotics Education, which brought international experts together to talk about how best to promote the message that drug use is intolerable and abstinence is an effective response to the growing crisis of drug addiction and crime (Tupper, 2008b).

The repeal of Prohibition in 1933 signalled a change in emphasis from alcohol to illicit drug prevention (Midford et al., 2001). During this time, drug education was actually discouraged because this might arouse the curiosity of individuals and lead them to experiment with drug use. In addition, starting at that time, movies were being produced that sent the message to the audience about the purported evils of drugs such as cocaine and marijuana. So the emphasis of drug education during this period shifted from conveying the message that drug use is wrong to arousing fear in potential users (Valverde, 1995). But the fear-arousal approach neither works nor leads to appropriate behavioral changes unless specific actions are recommended that will overcome or reduce the fear that is aroused (Flay & Sobel, 1983).

The period from the 1950s to the early 1960s was a time of relatively little education about any drugs other than alcohol and, to a certain extent, tobacco (Tupper, 2008b). However, the relative domestic tranquility of that time gave way to dramatic social disturbances in the areas of gender and generational relationships, civil rights, and socioeconomic class differences (Wilson & Kolander, 2000). This led to a rise in drug use, especially in the developed world, that would peak in the 1970s. As Tupper (2008b) observed:
“With the rise in illegal drug use among young people that occurred in most developed countries in the 1960s, the perceived need to scare young people away from experimentation with these substances again became a prominent issue for education. However, changing attitudes about drugs—including increased cross-cultural and historical awareness of human drug use and postmodern sensibilities of tolerance—made it more difficult to uphold the arbitrary distinction between alcohol and “drugs,” defined more through past legal and policy contingencies than through scientific or public health considerations.”

The information-dissemination approach remains to be the primary approach to drug education. However, instead of emphasizing the evil of drug use or using scare tactics to dissuade drug use, drug education in the 1960s focused primarily on providing factual information about the drugs and their harmful effects in the hope of promoting negative attitudes toward drug use (Midford et al., 2001; Wilson & Kolander, 2000). But research has shown that neither scare tactics nor information-dissemination was effective in reducing drug use (e.g. Bangert-Drowns, 1988; Kinder et al., 1980; Tobler et al., 2000). In addition, the vast number of drug education programmes that were planned during that time were implemented in a haphazard and uncoordinated manner.

The 1970s saw the introduction of affective education approaches to the drug problem that sought to reduce drug use by enhancing interpersonal and intrapersonal skills including self-esteem, assertion, communication, decision making and goal setting skills (Midford et al., 2001; Guzys & Kendall, 2006). This was made possible by the development of Social Learning Theory by Albert Bandura that stresses the mutual interrelationships among behavior, internal causes, and environmental factors (Ewen, 2003; Sharma, 2005). Add to this, the National Commission on Marijuana and Drug Abuse recommended a moratorium on school drug education as it had failed to halt youth drug use. But as is the case with information-dissemination approaches, affective education approaches also proved to be ineffective in reducing drug use (e.g. Kearney & Hines, 1980; Kim, 1988; Palinkas et al., 1996).

In the late 1970s, alternative programs based on the idea of “natural highs” flourished. “Natural highs” were programs designed to provide a safe environment for high-risk activities such as river rafting and wilderness experiences (Wilson & Kolander, 2000). Applied to drug education, this approach called for restructuring a part of an individual’s environment in order to provide him with alternatives to substance use (Botvin & Griffin, 2005). The assumption was that if an individual could be provided with real-life experiences that were as appealing as drug use, then his involvement in those activities would take the place of his involvement in drug use. These alternative activities might include community service, academic tutoring, sports, hobbies, etc. There is very little research on the effectiveness of this approach and most seem to suggest that the approach is practically ineffective in preventing substance use.

In the 1980s, many drug education programmes were developed that used social resistance skills approaches. Such approaches generally teaches students how to
recognize situations in which they will have a high probability of experiencing peer pressure to smoke, drink, or use drugs so that these situations could be avoided (Botvin & Griffin, 2005). They are also referred to as social influence or refusal skills approaches. A distinct feature of programmes using these approaches is the use of peer leaders as program facilitators, which has been shown to be promising, to say the least (Orme & Starkey, 1999). In contrast with the previous approaches, a number of studies have shown the effectiveness of social resistance skills approaches in reducing drug use (e.g. Cuijpers, 2002).

Competence enhancement approaches integrate the cognitive, affective, and social influence approaches. Based on Social Learning Theory and Problem Behavior Theory, these approaches emphasize the use of proven cognitive-behavioral skills training methods (e.g. instruction, demonstration, feedback, reinforcement, homework) where two or more of the following are taught:

- General problem-solving and decision-making skills,
- General cognitive skills for resisting interpersonal or media influences,
- Skills for increasing self-control and self-esteem,
- Adaptive coping strategies for relieving stress and anxiety through the use of cognitive coping skills or behavioral relaxation techniques,
- General social skills, and
- General assertive skills (Botvin & Griffin, 2005).

Research has shown that unless combined with social resistance skills training, competence enhancement approaches are not very effective.

Recently, there has been considerable interest in the harm minimization or harm reduction approach to drug education. Harm reduction attempts to assess the actual harm associated with any drug and then asks how this could be minimized or reduced through a comprehensive set of strategies that include education, treatment, and drug control (Guzys & Kendall, 2006). There is some resistance to this approach because it is widely seen as an alternative to abstinence and thus condones, if not encourages, drug use (Midford et al., 1998).

The latest developments in psychology and related disciplines are also finding applications in preventive drug education. For example, taking off from a humanistic springboard, “Drugsbridge” was proposed as a drug education programme designed to facilitate and empower informed choice in relation to drug issues, and to improve communication between young people and parents when discussing drug issues (Mallick & Watts, 2007). Using the Health Belief Model as basis, Gonzalez (1990) designed a drug education course that aims at increasing the students’ awareness of the severity of alcohol and other drug problems, how they are personally susceptible to these problems, and what behavioral options they have available to reduce the risk of alcohol and other drug-related problems. The Theory of Reasoned Action and the Theory of Planned Behavior were developed by Martin Fishbein and Icek Ajzen to examine the relationship
between belief and attitude, and to predict behavioral intention and behavior (Sharma & Kanekar, 2007).

The constructs in the Adult Education Model proposed by Paulo Freire—dialogue, conscientization, praxis, transformation, and critical consciousness—could also be applied in alcohol and drug education (Sharma, 2003). The Precaution Adoption Process Model takes into account the different stages in which people might be with regard to the adoption of a risky behavior (Sharma, 2007). Thus tailor-made or customized interventions could be prepared for an individual depending on the stage that he is in. A modification of Kumpfer and Turner’s Social Ecological Model (1990-1991) provided the theoretical framework for a study that examined the relationships among drug use, self-esteem, family climate, family and peer drug abuse, and self-efficacy (Finke et al., 2002). That study reported success in teaching children survival skills to resist the use of drugs.

Even emerging theories and methods from other social sciences could positively contribute to drug education. For example, Capability Theory, developed by economist and Nobel laureate Amartya Sen, which emphasizes the individual’s opportunities to make use of his available resources in order to achieve well-being as opposed to having his well-being shaped by the use of goods that he is able to acquire because of his income (Sharma, 2004). It was also proposed that a historical approach to drug education where archival materials (e.g. newspapers, government documents, old periodicals) can be used to provide a better understanding of the nature of the drug problem and the numerous policies formulated over time (Cintron & Roth, 2001). The visual and performing arts have been used as avenues to communicate messages about drug use (Macdonald & Nehammer, 2003).

III. Preventive drug education programmes in selected countries

Malaysia

In 1983, the Prime Minister declared the country’s drug problem as a national emergency and the government launched a massive campaign to eliminate this menace (Scorzelli, 1987). Their preventive drug education strategies include the training of government personnel and teachers, the integration of drug education into the school curricula, the creation of a semi-government organization (Pemadam) that promotes drug prevention, the training of youth leaders, and partnership with civic organizations such as the Lions Club and the Rotary Club (Fong et al., 1983; How, 1999; Scorzelli, 1987). The country aims to be drug-free by the year 2023. One example of a preventive drug education program in Malaysia is STRIDE (Students’ Resilience and Interpersonal Skills Development Education), which was found to have a positive impact on the participants (Hanjeet et al., 2007).

Philippines
Drug education in the Philippines first received its mandate in the early 1970s by way of Republic Act No. 6425 (Comprehensive Dangerous Drugs Act of 1972) as amended by Presidential Decree No. 44 and supported by MEC Memorandum No. 192 of 1980 (Teaching Materials for Drug Education). The law was later replaced by Republic Act No. 9165 (Comprehensive Dangerous Drugs Act of 2002). Section 43 of the new law required the instruction on drug abuse prevention and control in all schools to include the adverse effects of the abuse and misuse of dangerous drugs on the person, the family, the school and the community; preventive measures against drug abuse; health, socio-cultural, psychological, legal and economic dimensions and implications of the drug problem; steps to take when intervention on behalf of a drug dependent is needed, as well as the services available for the treatment and rehabilitation of drug dependents; and misconceptions about the use of dangerous drugs.

There are several organizations working on the area of drug education in the Philippines. The School Health and Nutrition Center of the Department of Education implements the National Drug Education Program, which aims at preventing drug abuse among students through the development of desirable values, attitudes and practices. The program was set up in 1992 by virtue of Republic Act No. 7624 entitle “An act integrating drug prevention and control in the intermediate and secondary curricula as well as in the nonformal, informal and indigenous learning systems and for other purposes” (Banaag & Daiwey, n.d.). The University of the Philippines hosts the ASEAN Training Center for Preventive Drug Education, one of four centers established to complement the ASEAN Senior Officials on Drug Matters efforts to carry out the work plan to operationalize the ASEAN plan of action on drug abuse control (Emmers, 2007). The Inter-Agency Council on Drug Abuse Prevention Education (IAC-DAPE) is a charitable, non-profit, non-stock corporation established to identify high risk individuals who are having problems due to alcohol and dangerous drugs. Specifically, it helps in the dissemination of information, education and communication regarding the ill effects of dangerous drugs. IAC-DAPE work side by side with the Preventive Education, Training and Education Division of the Dangerous Drugs Board of the Philippines.

Singapore

The drug problem in Singapore was reported to be already contained by the 1980s with the number of arrests for drug-related offenses per year corresponding to only one-tenth of one percent of the population (Teck-Hong, 1987). Their strategy focuses on the reduction of both supply and demand. Drug education programmes that have been organized, mainly by voluntary organizations, served to heighten the awareness of the public and students of the dangers of drug abuse. These covered campaigns and exhibitions, public talks, anti-drug abuse badge schemes, drug awareness programmes, parent group schemes, and neighborhood schemes. One example of their preventive drug education programme is the ASPIRE camp, which was launched in 2007 to educate students on the dangers of drug and inhalant abuse (SANA, 2008). The objectives of this programme, which uses Social and Emotional Learning and Experiential Learning Principles techniques, are to increase awareness of inhalant abuse and its consequences;
to promote anti-drug message to students; to instil a sense of self-efficacy; and to provide a platform for students to express themselves and showcase their creativity.

**Thailand**

Situated among opium-producing countries, Thailand is highly vulnerable to substance abuse, particularly opium. About 2.2% of the population are addicted to illicit drugs. The Ministry of Education is responsible for carrying out the national programme on preventive drug education in Thailand (Rankin, 1980). It implemented the “White School” programme, which promoted the concepts of a warm and supportive family, a healthy and pleasant community environment, school being a safe place, drug addicts being treated as patients, severe punishment for drug sellers, strict no-drugs policy in school, etc. (Boonmongkon *et al.*, n.d.). It is now implementing the “White House” programme which emphasizes the role of a warm family to encourage kids not to take drugs.

A recent study showed the effectiveness of life skills training on the knowledge level, attitudes, and the development of refusal, decision-making, and problem-solving skills of Thai high school students (Seal, 2007). In another study, 79.3% of respondents reported getting their information on substance abuse in school compared to only 40.6% from their peers, which could be interpreted as a successful imparting of knowledge via drug education but a failure in terms of changing behaviors (Ruangkanchanasetr *et al.*, 2005).

**Australia**

Preventive drug education started in the mid-1960s as a crisis response when drug use rose sharply (Pettingell, 2008). The objective of drug education in schools was ‘to provide the individual with opportunities for acquiring knowledge, attitudes and practices that will enable him to make sound decisions about the use of drugs’. This objective would be achieved mainly through the health education program.

In 1970, the National Drug Education Program was launched. Drug education developed during the 1970s and 1980s as the main hope for preventing illicit drug use by the young in the future. The aims were to prevent drug abuse through preventing the adoption of habits that led to it and by encouraging people to make informed choices based on increased knowledge and discriminatory attitudes. The program also aimed to allay public anxiety about the drug problem, to increase the amount of information about drugs and the drug problem in the community, and to increase communication between the generations about drug use and abuse. It also aimed at helping individuals to develop personal resources to cope with stress and build self-satisfying personal life styles.

The Center for Education and Information on Drugs and Alcohol (CEIDA), established in the late 1970s to continue the attempt to develop and implement a coherent approach to drug education. The policy of harm minimization or reduction, the objective of which was articulated as ‘to minimise the harmful effects of drugs on Australian
society’, was seriously looked at in the 1980s. Until now, there is a great debate between advocates of total abstinence and advocates of harm reduction.

**Germany**

Preventive drug education in Germany has been continually evolving since the late 1960s (Franzkowiak, 2002). This evolution could be divided into five distinct phases, to wit:

1. **Drug deterrence and repression (late 1960s to mid-1970s).** This is the period of the first drug wave in Germany. Most drug education approaches aimed at fighting drugs and any use of illegal drugs among youth by focusing on repression and deterrence. Drug education materials, some of which were deliberately inaccurate or misleading, were designed to arouse fear, emphasizing the dangers and risks of all drug-taking.

2. **Drug education and drug information (mid-1970s).** During the mid-1970s, changes were made to drug education approaches, highlighted by a radical change in the main message being communicated. This time, the occasional consumption of illicit drugs for recreational or short-term compensatory purposes is viewed as being tolerable if it occurs in a controlled setting and is done in a socially acceptable manner. The approaches shifted the focus from the user to the social and systemic determinants of drug use. An example of this new focus is the message that “perfectly normal addicts come out of perfectly normal families”.

3. **Primary drug prevention through alternatives to risk taking and strengthening of personal resources (1980s).** Noting the many harmful unintended consequences of repressive prevention efforts, the strategies used in drug education shifted to non-repressive attitudes, information and education. Slogans such as “addiction always has a history” prevailed. Activities focused on strengthening personality and reducing stress-related problems in order to enhance coping mechanisms to deal with developmental and other stressors.

4. **Primary drug prevention through a strengthening of personal and social resources, promotion of resistance, and the development of life skills (early 1990s).** During this time, more specialists became attracted to comprehensive strategies that combined resistance skills training with life skills promotion. The development of a strong, stable, and competent personality was seen as an effective shield against drug-related risks. Sample slogans that came out during this time are “strengthen the children” and “strong instead of addicted”.

5. **Primary drug prevention through a strengthening of personal and social resources, promotion of resistance and life skills, and the promotion of risk-taking competence and harm reduction (mid- to late-1990s).** Abstinence is no longer the main goal of prevention efforts but, rather, safer drug use and increasing competence in taking risks.

**United Kingdom**
The rate of drug abuse in the United Kingdom is already stabilizing, if not actually falling (Allott et al., 1999). In recent times, drug education is mandated by the Department of Education Circular 4/95 (Drug Prevention and Schools) and the National Curriculum on science that required drug education for students aged 5 to 16 years (Wyvill, 1999) with the following key messages:

- Key Stage 1 (5-7 yrs): the role of drugs as medicines
- Key Stage 2 (7-11 yrs): tobacco, alcohol and other drugs can have harmful effects
- Key Stage 3 (11-14 yrs): the abuse of alcohol, solvents, tobacco and other drugs affects health; the body’s natural defense may be enhanced by immunization and medicines; smoking affects lung structure and gas exchange
- Key Stage 4 (14-16 yrs): the effects of solvents, tobacco, alcohol and other drugs on body functions.

IV. The future of preventive drug education

After almost 130 years of drug education in the world, it is but proper to ask the same question that Professor Richard Midford of Curtin University in Australia asked, “does drug education work?” (Midford, 2000). His short answer to the question posed in the title of his paper is yes, but with considerable qualifications. He noted that recent research interventions do stop or delay the onset of drug use in a small percentage of students under optimum conditions. However, he was quick to add that this does not necessarily mean that provision of mass drug education programs will achieve a reduction in use. Instead, he proposed, a better question to ask might be, “what can be done to maximise the benefits of such an intervention?”

The developments in disciplines that have the potential to contribute significantly to preventive drug education (e.g. medicine, psychology, education, sociology) are staggering because of the magnitude of findings being published in scientific journals and reported in newspapers and magazines. However, we need to scrutinize these findings in order to be able to integrate the theories and techniques that would be suitable to an adopting country’s culture and resources.

There are several review articles that have been published that attempted to identify best practices in drug education programmes (e.g. McBride, 2003; Midford et al., 2001; Soole et al., 2008; Stead & Angus, 2004). In some of these articles, it is possible to identify what program features appear consistently. Using these program features, it then becomes possible to develop a new drug education program that would hopefully be more effective than its predecessors.

While it is really beyond the scope of this paper to extract all the best practices from the scientific literature, I will nevertheless provide a list of components of effective programs based only on one article (McBride, 2003). This could hopefully provide a
springboard from which evaluations of existing programs in the participants’ respective countries could be made.

1. **Timing and programming considerations**
   - timing of interventions (must be before use or during initial exposure)
   - needs of target group (relevant to participants)
   - goal of education (non-use vs. delayed use vs. harm reduction?)
   - booster sessions (throughout schooling years)

2. **Content and delivery**
   - social influence (resistance skills training and normative education must be included)
   - interactive, activity-oriented
   - focus on behavior change (rather than knowledge and/or attitudes)
   - multi-drug focus or single-drug focus (single-drug focus is more effective)
   - peer interaction / peer leaders (peer programs are more effective)

3. **Skills of teacher / facilitator**
   - teacher training (as drug education is best taught by classroom teachers, teacher training is paramount)

4. **Dissemination**
   - marketing (researcher must package programme for immediate use by teacher)
   - cost (in a limited funding regime, prioritize classroom-based interventions)

**REFERENCES**