

## Editorial

### Adolescent drug abuse - Awareness & prevention

The abuse of alcohol and illicit and prescription drugs continues to be a major health problem internationally. The United Nations Office on Drugs and Crime (UNODC) reports that approximately 5 per cent of the world's population used an illicit drug in 2010 and 27 million people, or 0.6 per cent of the world's adult population, can be classified as problem drug users. It is estimated that alcohol abuse results in 2.5 million deaths per year and that heroin, cocaine and other drugs are responsible for 0.1 to 0.2 million deaths per year. In addition to causing death, substance abuse is also responsible for significant morbidity and the treatment of drug addiction creates a tremendous burden on society. UNODC estimates that worldwide costs related to treating drug abuse total \$200-\$250 billion, or 0.3-0.4 per cent of global GDP; additionally, it is estimated that only 20 per cent of drug users received treatment for their dependence in 2010<sup>1</sup>.

Existing studies have found a high correlation between adolescent abuse and becoming a problem drug user in adulthood<sup>2</sup>; therefore, it can be inferred that many problem drug users start abusing drugs at an early age. Additionally, accidental and intentional fatalities that are associated with drug and alcohol use represent one of the leading preventable causes of death for the 15 to 24-year-old population. Alcohol and other drug use in the adolescent population carries a high risk for school underachievement, delinquency, teenage pregnancy, and depression<sup>2</sup>.

Preventative science postulates that negative health outcomes, including those resulting from substance abuse, can be prevented by reducing risk factors and enhancing protective factors<sup>3</sup>. The general framework used in this article is based on research presented by the National Institute of Drug Abuse (NIDA) and

emphasizes the strategy of targeting modifiable risk factors and enhancing protective factors through family, school and community prevention programmes.

#### Identify risk factors

Prevention of substance abuse among adolescents requires awareness of characteristics that place youth at risk and targeting risk factors that are modifiable. Many studies have attempted to identify risk factors associated with adolescent drug and alcohol usage.

In its 2010 report titled "Preventing Drug Use Among Children and Adolescents", NIDA lists several factors that can enhance or mitigate adolescent risk for initiating or continuing to abuse drugs. These factors include exposure to drugs, socio-economic status, quality of parenting, peer group influence and biological/inherent predisposition towards drug addiction<sup>4</sup>. A retrospective study by Dube *et al*<sup>5</sup> measured correlations between the number of adverse childhood experiences (ACEs) and future substance abuse behaviour. Adverse childhood events included abuse (physical, emotional or sexual), neglect (physical or emotional); growing up with household substance abuse, criminality of household members, mental illness among household members, and parental discord and illicit drug use. The study specifically compared the number of ACEs resulting in a greater likelihood of drug use initiation under 14 yr of age and also compared the number of ACEs associated with increased risk of developing addiction. The study demonstrated that each additional ACE increased the likelihood for drug use under 14 yr of age by two to fourfold and raised the risk of later addiction by five times. People with five or more ACEs were seven to ten times more likely to report illicit drug use than those with none<sup>5</sup>.

Hawkins *et al*<sup>3</sup> also reviewed many studies that attempted to identify risk factors for adolescent drug abuse. They discussed specific risk factors occurring at the societal/community level and at the individual level. Of the societal risk factors, the following were identified: laws and norms favourable toward behaviour (including lower minimum drinking ages) and availability. Interestingly, socio-economic status did not seem to correlate with increased risk of drug abuse among adolescents; it was only in cases of extreme poverty in conjunction with childhood behavioural problems where increased risk was observed. The personal characteristics that positively correlated with drug and alcohol abuse are numerous and include low harm avoidance, poor impulse control, parents with a history of alcoholism and drug abuse, high levels of family conflict, lack of and/or inconsistent parental discipline, a history of academic failure and a history of antisocial and aggressive behaviour<sup>3</sup>.

Being aware of these risk factors can assist families, health professionals, schools and other community workers with identifying at risk youth and aid in reducing or eliminating risk factors through prevention and treatment programmes.

### Prevention programmes

Botvin *et al*<sup>6</sup> cited several key factors required in prevention programmes to make them effective. These factors include a need to address multiple risk and protective factors, provide developmentally appropriate information relative to the target age group, include material to help young people recognize and resist pressures to engage in drug use, include comprehensive personal and social skills training to build resistance, deliver information through interactive methods and cultural sensitivity that includes relevant language and audiovisual content familiar to the target audience<sup>6</sup>. Successful prevention programmes should incorporate all of these characteristics and can then be provided through the family, school, community or healthcare community.

The 2010 NIDA Report<sup>4</sup> emphasizes both the role of family and community prevention programmes as vital to deterring child and adolescent substance abuse. Their findings are summarized below:

*Family prevention programmes:* The NIDA Report emphasizes strengthening protective factors through the family, including increasing family bonding and using appropriate discipline. The following family

characteristics place children at a higher risk for substance abuse: parent with a history of alcoholism and drug abuse, high levels of family conflict, lack of and/or inconsistent parental discipline. It follows that eliminating these risk factors can reduce the risk of a child/adolescent abusing drugs and alcohol. Once these risk factors are identified, families may benefit from formal prevention programmes that can focus on enhancing family bonding, parenting skills (including communication, rule-setting, appropriate disciplinary actions) and changing parental behaviours that may place a child at risk for later abuse<sup>4</sup>.

One example of a family prevention/treatment programme is multi-dimensional family therapy (MDFT). This is a comprehensive family-based outpatient or partial hospitalization (day treatment) programme for substance-abusing adolescents and those at high risk for continued substance abuse and other problem behaviours. MDFT focuses on helping youth develop more effective coping and problem-solving skills for better decision-making and helps the family improve interpersonal functioning as a protective factor against substance abuse and related problems. Liddle *et al*<sup>7</sup> compared multi-dimensional family therapy with individual cognitive behavioural therapy (CBT) and found that although both treatments were promising, MDFT was more efficacious in treating substance use problem severity, in addition to creating more long lasting effects than standard CBT.

*Community and school prevention programmes:* In addition to family programmes, NIDA emphasizes school and community programmes as being beneficial in substance abuse prevention. The Report also suggests introducing programmes at an early-age (pre-school/first grade) to address risk factors for later substance abuse, such as early aggression, poor social skills and academic difficulty.

One of the many examples of school prevention programmes cited in the NIDA Report<sup>4</sup> is Reconnecting Youth (RY); a school-based prevention programme for high school students with poor school achievement and a potential for not completing their education. Participants may also show signs of multiple problem behaviours, such as substance abuse, depression, aggression, or suicidal behaviours. Students are screened for eligibility and then invited to participate in the programme. The programme goals are to increase school performance, reduce drug use, and learn skills to manage mood and emotions. RY blends small group

work (10-12 students per class) to foster positive peer bonding, with social skills training in a daily, semester-long class. Early experiments have shown that participation in RY improved school performance (20% improvement in grade point averages), decreased school dropout, reduced hard drug use (by 60%), and decreased drug use control problems, such as progression to heavier drug use<sup>8,9</sup>.

*Role of healthcare providers in prevention:* It is believed that less than 30 per cent of primary care providers perform any screening for substance abuse and as many as 69 per cent do not offer any type of counselling<sup>10</sup>. Hallfors *et al*<sup>11</sup> cited the following barriers affecting the screening and prevention services in primary care: lack of tested screening tools, lack of knowledge, skills and confidence, financial disincentives (third party services for covering prescription abuse vary widely); and lack of follow up services and resource limitations.

Efforts from paediatricians and primary care providers to overcome these barriers can assist in identifying substance abusers and eventually lead to their treatment.

## Conclusion

The abuse of alcohol and drugs has resulted in significant morbidity and mortality among adolescents worldwide. Many of these youth will lose their lives to drugs and alcohol and a significant number are likely to grow up to become problem drug users. Although, the substance abuse problem is complex and large in magnitude, there is a substantial amount of evidence-based research available to physicians, community leaders and schools to implement interventions that can decrease adolescent substance abuse rates. Because this issue is not peculiar to any one community or culture, we recognize that individual interventions may not be universally effective. Therefore, we emphasize the NIDA strategy of targeting modifiable risk factors and enhancing protective factors through family, school and community prevention programmes, as a generalized framework for healthcare and community activists to use when researching programmes and strategies best suited for their own community.

**Bharath Chakravarthy\*, Shyam Shah  
& Shahram Lotfipour**

The Center of Trauma & Injury Prevention  
Research- University of California,  
Irvine- Department of Emergency Medicine  
University of California  
Irvine School of Medicine  
California, USA

\*For correspondence:  
bchakrav@uci.edu

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