

Drug Abuse is a Global Social Evil - Special Reference with Indian Context

T.Mangilal,^{1*}T.Vijaya Kumari,¹T.Kavitha.²

^{1*}Department of Pharmacy, Osmania University,Hyderabad-500 007.

^{1,2}KGR Institute of Technology and Management, Rampally, Keesara, R.R (Dt) 501301.

E-mail: tilavath_lal@rediffmail.com

Subject: Pharmacovigilance

Abstract

The Indian literature related to drug abuse in general and Cannabis in particular has been reviewed and possible implications discussed. In this regard to solve the existing controversy, 50 pure chronic cannabis users were evaluated for their physical, mental, cognitive and socio economic functions and the results were compared with a matched control group. Results of this study did not reveal any impairment in these areas It is concluded that cannabis, in India, may not be as much injurious to health as has often been mentioned in Western Countries' Future areas of research have been suggested. Drug abuse and addiction lead to a complex set of social, medical and economic problems with serious implications. According to experts, it is widely prevalent, cutting across age, class and gender. Yet, it is difficult to estimate the number of drug abusers or formulate a comprehensive approach to deal with the issue primarily because it involves a "hidden population" that does not seek treatment and hence remains under-reported. This makes it difficult to assess the problem, estimate costs, both social and economic, and design intervention strategies. Realizing the need for extensive data and information on the issue, the Ministry of Social Justice and Empowerment and the United Nations Office on Drugs and Crime published in 2004 one of the most comprehensive baseline studies, "The Extent, Pattern and Trends of Drug Abuse in India: National Survey". The major components of the survey that used multiple methodologies and indicators included a National Household Survey (NHS) of randomly selected men across the country; the Drug Abuse Monitoring System (DAMS), which compiled data from new patients at treatment centers; People start on drugs for a number of reasons, from curiosity and recreation to the need to cope with stress. What begins as abuse can often lead to dependence. Physically, the body develops tolerance for it, and more of the drug is needed to experience the same effect. This leads to increases in consumption, which eventually leads to physical dependence.

Keywords: *Drug Abuse, Social evil, Cannabis, health side effects*

Introduction

The excessive and unregulated use of drugs which is popularly called drug abuse or drug addiction has emerged as a major social problem recently and has crossed the border of caste, class, creed, sex and nation.¹ It is like curse for developing country like India as it has already existing problems like poverty, unemployment and overpopulation.² Drug abuse affects individuals, their families and the society as a whole. Drug abuse often leads to crime as a result of reduced impulse control, paranoia and negligence.³ Thus, affects the law and order, economic production and human welfare. Drug abuse implies physical dependence upon a drug including the development of tolerance and withdrawal.⁴ An addict who develops tolerance requires more and more of the drug to transport him to the world of fantasies.⁵ If the addict is not allowed to take the drug

he suffers from painful and uncontrollable convulsions, vomiting, depression and various other maladies.⁶ If one looks at the causes of the spread of this evil, the changes in the traditional pattern of society emerge as the major one.⁷ Rapid industrialization and urbanization have ushered in a new way of life with new values like individualism and permissiveness. This has resulted in loosening of informal means of social control, for example, influences of conventional sophistication but have low frustration tolerance.⁸ the stresses and strains of modern life with resulting frustration and depression give rise of escapist tendencies.⁹Way to materialism and consumerism and the resulting alienation also has a bearing on the present day trend. Anonymity of our big cities is providing a favorable environment of drug addicts.¹⁰ Family has also shown changes in its

structure and function recently. As a result parental control is less today because of the working situation of both parents.¹¹ Break up of joint family also means less control over the young people. Stressful home environment and broken home are often the contributory factors.¹² If a child's basic needs like security, response, recognition and development are not adequately met at home, he develops feelings of inadequacy, frustration and emotional insecurity.¹³ He seeks to derive satisfaction from any other sources and comes in contact with unscrupulous persons. Delinquent gangs or peer group fulfill various needs of a dissatisfied adolescent and provide rationalization to engage in drug-use.¹⁴ Failure or maladjustment at school and unable to satisfy expectations of their parents leads many a young man to drug addiction.¹⁵

Thus, drug abuse is a multifaceted problem which has to be tackled in the social context. A comprehensive approach towards awareness building, preventive education, counseling and guidance, de-addiction, follow-up and rehabilitation of addicts is needed.¹⁶ And in this task the governmental efforts have to be vigorously supported by the collective initiatives of people themselves.¹⁷ Parents, teachers, social workers, opinion leaders, youth and voluntary organization have to play an important role to motivate the youth to keep away from drugs.¹⁸

Besides the family, peer groups and teachers, counselors and guides have an important role to play in the strategy for prevention of drug abuse. Schools, colleges and other educational institutions should provide facility for personal, vocational and educational guidance and also encourage them to make use of such facilities.¹⁹ Adolescents specially need training to develop self-control, tolerance, strengthening their identity and development of self-concept to face the world boldly. A drug addict being a helpless individual may not come forward for treatment or counseling.²⁰ So he must be carefully supervised by someone close to him. Providing hope and trust a drug addict should be rehabilitated. Counseling helps an addict to change his behavior and adapt a new attitude and values. Counseling is deliberate effort to help a person to sort out his problems in a rational way, to clarify the conflicts and issues in this life and to discuss the feasibilities of various courses of action. This is done to enable the persons to assume the responsibility of making choices.²¹

Legal measures are necessary to deal with the rising trend of drug addiction. Narcotic and Psychotropic Substances Act 1985 and Prevention of Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act 1988 have been brought into force all over the country to deal with the problem more effectively.²² The former Act provides for punishment of rigorous imprisonment for 10 years, which may extend to 30

years and also a minimum fine of Rs. 1 lakh. With the death penalty introduced and the forfeiture of assets, it ranks now as one of the very powerful laws and one of the highest deterrents. Even consumption of narcotic drugs is an offence under the Act with punishment ranging from 6 months to 1 year. However, an addict can be given a onetime change by the court to seek treatment.²³

It is essential to create awareness among people about the horrible consequences of drug addiction. Radio, TV, Newspapers, Cinema, theatre, Drama, Street plays, voluntary organizations' efforts etc. are the important means to create an awareness and consciousness of the prevention of drug abuse. Socio-cultural programmes including essay, debate, poster competitions, film shows, exhibitions etc. need to be promoted in education institutions. Any society can survive only on certain principles of morality and orderly behavior.²⁴ This had been stressed by several thinkers. It is not too late to release the seriousness of the problem of drug addiction. This could be the most suitable occasion to quote Aldous Huxley "... pen is mightier than sword. But mightier than the pen or the sword is the pill". Huxley's point emphasizes the possibility of pill, all consuming. Before such a catastrophe overtakes our youth, we must act.²⁵

June 26 is celebrated as International Day against Drug Abuse and Illicit Trafficking every year. It is an exercise undertaken by the world community to sensitize the people in general and the youth in particular, to the menace of drugs.²⁶ The picture is grim if the world statistics on the drugs scenario is taken into account. With a turnover of around \$500 billions, it is the third largest business in the world, next to petroleum and arms trade. About 190 million people all over the world consume one drug or the other.²⁷ Drug addiction causes immense human distress and the illegal production and distribution of drugs have spawned crime and violence worldwide. Today, there is no part of the world that is free from the curse of drug trafficking and drug addiction. Millions of drug addicts, all over the world, are leading miserable lives, between life and death.²⁸

Drug Abuse is Social Global Evil

"Drug is Death: Say no to Drugs" and other similar slogans visible on billboards and newspapers are proofs of the social awareness drug abuse has attracted. Drug related crimes are equally conscience stirring and have made people much over it.²⁹ We all have relied on the drugs. Our doctors have prescribed for the various diseases, so, how can its use be an abuse. The use of psychoactive substances for obtaining relief from mental tension or physical discomfort i.e. for therapeutic uses is legitimate use of drugs.³⁰ Contrary to this, when used for attaining pleasure or new experiences and consequent physical or psychological harm is termed as drug abuse. Such

drug abuse induces drug dependence and ultimately addiction and habituation. In drug addicts there is enslavement to drugs and compulsion to obtain and consume it by any means. They develop a psychological and physical dependence on the effects of the drugs and an effect detrimental to the individual and to the society.³¹

The abusable drugs are of various types; sedatives or depressants that relax the central nervous systems, induce sleep and provide a soothing effect.³² Stimulants activate the central nervous systems and relieve tensions, make them aggressive and counteract fatigue. Narcotics, like depressants affect — the central nervous system and produce feelings of pleasure strength and lesson inhibitions. Hallucinogens produce distortion of perceptions and dream images. Drug abuse has been explained by psychologists and sociologists.³³ It is generally regarded that pleasurable sensations produced by drugs reinforce their use or it satisfies certain psychological needs, or is a response to fear and insecurity to the conditions of modern life, often association with users is also regarded as a reason for accepting drugs. Drug abuse can also be explained in terms of weakening of social bonds between individuals and society due to maladjustment alienation and non-commitments.³⁴

A new dimension in drug abuse has been its use by sports persons to enhance their potential beyond humanly endurable limits. The incident of Ben Johnson was a jolt to the sports lovers all over the world and has caused much thinking on effort to curb the recurrence of such incidents.³⁵ However, with unflinching regularity such controversies erupt, for example Katrin Krabe. It would be appropriate here to search for the causes of drug abuse. Among sports persons it can be safely attributed to the search and urge for glory. It can be an attempt to gain an unfair advantage over the others in the achievement orientation of modern society. The ends have become all powerful and means have been relegated as secondary.³⁶

The use of drugs among children which is most shocking and astounding can be variously explained. Juvenile delinquents take to it in defiance and deviance to the social values. Some children accept it under peer group pressure and as an act of proving their 'masculinity'. Others take to this due to weakening of emotional bonds between parents and siblings.³⁷ The children who are in an impressionable age require much effectual and emotional bond to wean them away from such antisocial activities. In rural areas the use of psychoactive substance is for religious purposes and on ritual occasions. However, it is also used to relieve fatigue and also a source of entertainment.³⁸

In industrial urban setting the use is for more or less the same reasons. Apart from the health

and physical disadvantages drug abuse causes, it has also led to e acceleration in crime. An addict would stop, nothing to get his dose of the drug.³⁹ There has been a spurt in thefts and murders by these addicts whose dependence physical and psychological upon the drugs is so great that the accepted values and norms of the society are shelved and their prime concern becomes acquiring their dosage.⁴⁰

There has been an increase in smuggling and peddling of those drugs as the economic advantages are numerous. It has also made the gangs engaged in such activities more vicious and violent as the economic stakes are very high.⁴¹ This delineation of drug abuse brings us to the point where reference must be made to efforts to curb their evil. Given that the use of drugs have historical and cultural context makes prevention more complicated. Efforts have been made to combat drug trafficking, treat addicts and prevent drug abuse. India being on the transit route faces a challenging and unenviable task.⁴²

Substances Act has not been very effective, Seizures have increased and so have indictment for offences but that is reflective only of the increase in those activities and not any positive development of control of drug abuse.⁴³ Other legal sanctions are merely suggestions of intention and not actions. Government regards drugs as a source of revenue and therefore its cultivation cannot be stopped. The inefficiency of administrative machinery in policing and preventing abuse needs no highlighting.⁴⁴

The only positive development is the establishment of de-addiction and detoxification centers which, have enabled us to salvage some people from destruction. However, these centers are expensive and the addicts have a tendency to relapse unless they have a strong will power and a desire to abdicate the malaise.⁴⁵ Voluntary associations has also been doing a commendable task. In conclusion, we can say that drug abuse has been realized as a major evil. It is a social problem and has legal ramifications. It has been given a high profile now and mass media has been disseminating information to educate people with the intention of preventing drug abuse. The battle continues and war on drugs is on.⁴⁶

India too is caught in this vicious circle of drug abuse, and the numbers of drug addicts are increasing day by day. According to a UN report, One million heroin addicts are registered in India, and unofficially there are as many as five million. What started off as casual use among a minuscule population of high-income group youth in the metro has permeated to all sections of society.⁴⁷ Inhalation of heroin alone has given way to intravenous drug use, that too in combination with other sedatives and painkillers. This has increased the intensity of the effect, hastened the process of addiction and complicated the process of recovery.⁴⁸ Cannabis,

heroin, and Indian-produced pharmaceutical drugs are the most frequently abused drugs in India. Cannabis products, often called charas, bhang, or ganja, are abused throughout the country because it has attained some amount of religious sanctity because of its association with some Hindu deities.⁴⁹ The International Narcotics Control Board in its 2002 report released in Vienna pointed out that in India persons addicted to opiates are shifting their drug of choice from opium to heroin. The pharmaceutical products containing narcotic drugs are also increasingly being abused. The intravenous injections of analgesics like dextropropoxyphene etc are also reported from many states, as it is easily available at 1/10th the cost of heroin. The codeine-based cough syrups continue to be diverted from the domestic market for abuse.⁵⁰

Drug abuse is a complex phenomenon, which has various social, cultural, biological, geographical, historical and economic aspects. The disintegration of the old joint family system, absence of parental love and care in modern families where both parents are working, decline of old religious and moral values etc lead to a rise in the number of drug addicts who take drugs to escape hard realities of life.⁵¹ Drug use, misuse or abuse is also primarily due to the nature of the drug abused, the personality of the individual and the addict's immediate environment. The processes of industrialization, urbanization and migration have led to loosening of the traditional methods of social control rendering an individual vulnerable to the stresses and strains of modern life.⁵² The fast changing social milieu, among other factors, is mainly contributing to the proliferation of drug abuse, both of traditional and of new psychoactive substances. The introduction of synthetic drugs and intravenous drug use leading to HIV/AIDS has added a new dimension to the problem, especially in the Northeast states of the country.⁵³

Drug abuse has led to a detrimental impact on the society. It has led to increase in the crime rate. Addicts resort to crime to pay for their drugs. Drugs remove inhibition and impair judgment egging one on to commit offences. Incidence of eve-teasing, group clashes, assault and impulsive murders increase with drug abuse.⁵⁴ Apart from affecting the financial stability, addiction increases conflicts and causes untold emotional pain for every member of the family. With most drug users being in the productive age group of 18-35 years, the loss in terms of human potential is incalculable. The damage to the physical, psychological, moral and intellectual growth of the youth is very high. Adolescent drug abuse is one of the major areas of concern in adolescent and young people's behavior.⁵⁵

It is estimated that, in India, by the time most boys reach the ninth grade, about 50 percent of them have tried at least one of the gateway drugs.

However, there is a wide regional variation across states in term of the incidence of the substance abuse. For example, a larger proportion of teens in West Bengal and Andhra Pradesh use gateway drugs (about 60 percent in both the states) than Uttar Pradesh or Haryana (around 35 percent).⁵⁶ Increase in incidences of HIV, hepatitis B and C and tuberculosis due to addiction adds the reservoir of infection in the community burdening the health care system further. Women in India face greater problems from drug abuse.⁵⁷ The consequences include domestic violence and infection with HIV, as well as the financial burden. Eighty seven per cent of addicts being treated in a de-addiction center run by the Delhi police acknowledged being violent with family members. Most of the domestic violence is directed against women and occurs in the context of demands for money to buy drugs. At the national level, drug abuse is intrinsically linked with racketeering, conspiracy, corruption, illegal money transfers, terrorism and violence threatening the very stability of governments.⁵⁸

India has braced itself to face the menace of drug trafficking both at the national and international levels. Several measures involving innovative changes in enforcement, legal and judicial systems have been brought into effect. The introduction of death penalty for drug-related offences has been a major deterrent.⁵⁹ The Narcotic Drugs and Psychotropic Substances Act, 1985, were enacted with stringent provisions to curb this menace. The Act envisages a minimum term of 10 years imprisonment extendable to 20 years and fine of Rs. 1 lakh extendable up to Rs. 2 lakhs for the offenders. The Act has been further amended by making provisions for the forfeiture of properties derived from illicit drugs trafficking.⁶⁰

Strategies to Prevent drug abuse at both national and international level

Comprehensive strategy involving specific programmes to bring about an overall reduction in use of drugs has been evolved by the various government agencies and NGOs and is further supplemented by measures like education, counseling, treatment and rehabilitation programmes. India has bilateral agreements on drug trafficking with 13 countries, including Pakistan and Burma.⁶¹ Prior to 1999, extradition between India and the United States occurred under the auspices of a 1931 treaty signed by the United States and the United Kingdom, which was made applicable to India in 1942. However, a new extradition treaty between India and the United States entered into force in July 1999. A Mutual Legal Assistance Treaty was signed by India and the United States in October 2001. India

also is signatory to the following treaties and conventions.⁶²

- 1961 U.N. Convention on Narcotic Drugs
- 1971 U.N. Convention on Psychotropic Substances
- 1988 U.N. Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances
- 2000 Transnational Crime Convention

The spread and entrenchment of drug abuse needs to be prevented, as the cost to the people, environment and economy will be colossal. The unseemly spectacle of unkempt drug abusers dotting lanes and by lanes, cinema halls and other public places should be enough to goad the authorities to act fast to remove the scourge of this social evil.⁶³ Moreover, the spread of such reprehensible habits among the relatively young segment of society ought to be arrested at all cost. There is a need for the government enforcement agencies, the non-governmental philanthropic agencies, and others to collaborate and supplement each other's efforts for a solution to the problem of drug addiction through education and legal actions.⁶⁴

Problems and solutions

Drug Abuse: A History of Intercession - This is a controversial issue where different people have different opinions. It varies from individual to individual, from society to a way of life, and from legal to illegal.⁶⁵ Drugs become abused whether they are recreational, narcotics or alcohol. When we talk about the misuse of substances and how they are used for the wrong reason without regulations that put the person at risk without taking that into account. It is like gambling when an individual use recreational drugs or abuse narcotics.

Drug abuse is generally defined as the use of a drug with such frequency that the user has physical or mental harm or it impairs social abilities. Drugs are used as pain killers to avert physical and/or emotional pain by providing the user with a temporary escape from life's realities. Even though, they cause different, more serious problems with only a short escape from life's agonies. There are five different classifications (schedules) of drugs in the Controlled Substance Act of 1970. The FDA (Food and Drug Administration) and the DEA (Drug Enforcement Administration) choose what substance falls into what classification.⁶⁶

Prescription Pill Drug Abuse - The commonly abused medication is a depressant which is commonly known to some as a Diazepam (Valium) or also Alprazolam (Xanax). These are prescribed for many reasons starting with anxiety, panic attacks,

stress, and sleep disorders. The effects vary upon prescription because individual who take them for a long period of time would need trained professions to help discontinuing use because depressant are classified as having negative effects such as seizure, a person feels sleepy because it "...decreases brain activity that produces a drowsy or calming effect that is beneficial to those suffering from anxiety or sleep disorder."(National Institute on Drug Abuse).⁶⁷

Problems

- Effect on parents, distress, pain
- Effect on family (brothers, sisters, wives, husbands, children)
- Effect on work, productivity, punctuality, career
- Criminal problems, theft, police resources, smuggling, mafia, underworld, gangs
- Medical problems, addiction, death, overdose, driving, irrational decisions or behavior, hospitalization, medical resources, treatment, clinics, detoxification, counseling

Solutions

In India, there have been many steps taken by various governmental and non-governmental agencies in the area of prevention of substance abuse. A major achievement has been the recent inclusion of information on substance abuse as an obligatory component of the school curriculum. On the demand side, the Ministry of Health and Family Welfare has established several de-addiction centers which are mostly based at the district hospital level: there are about 130 such centers spread across the country now. A Narcotic Drugs and Psychotropic Substances (NDPS) Act was passed in 1985 and amended in 1989. In 1999-2000, the Ministry of Social Justice and Empowerment, along with the United Nations Office for Drugs and Crime, undertook for the first time a major national study on the extent, patterns and trends of substance abuse in the country, a major component of which was a national household survey. This seminal study has become the basis for planning of substance abuse prevention and treatment strategies, following effort should be facilitated.⁶⁸

- Education, schools, awareness, campaigns, choices, advertising
- Counseling, treatment, advice, confidential, helpline
- Communication between parents and children, meals, non-judgmental, firm, close, open communication
- Close family relationships: brothers, sisters, parents
- Employment, meaningful activity, activities in evenings

- Good environment, leisure, sports, friends
- Expectations

Conclusion

People who are suffering emotionally use drugs, not as a medical treatment but as an escape from their problems. They take to drugs to remove loneliness or relieve tension. Drug abuse means illicit consuming of any naturally occurring or pharmaceutical substance to bring about a change in their existing situation. They ignore the physic mental damage that causes the drug abuse. Drug abuse causes many health problems. It includes weakness, loss of body weight and respiratory disorders. One of the most important effects of drug abuse is impaired judgment and lack of rational thinking. A drug addict develops certain psychological problems such as anxiety, depression, irritability and personality problems.⁶⁹

LSD, ganja, brown sugar, crude molasses, cocaine, heroin, etc. are some of the widely used drugs. Crack is a very common drug which can be easily prepared. Some drugs are consumed while some are inhaled. With every puff of smoke, one inhales a deadly combination of poisonous chemicals. Drug abuse is a major cause of liver problem, heart attack, high blood pressure, etc.

People start taking drugs from several reasons. Some take it out of curiosity and recreation or to cope with stress. Those who start taking drugs are either unemployed or frustrated due to some social or family problem. Once started as a recreation it turns out to be a dependency. An addict finds it difficult to live without drugs. He can go to any extent to satiate his urge for drugs. An addict remains hooked to this problem. At this stage, even if he tries to give up his habits, he is helpless. Lack of drug causes severe withdrawal symptoms, which disappear when the drug is taken again.⁷⁰

According to National Survey, hardly a third of drug dependents reported having taken treatment. In the findings of other agency it was found as low as two per cent. It is largely because people do not see drug abuse as a medical problem. Besides, lack of rehabilitation and access to treatment facilities are various other causes for not seeking treatment. There are various agencies working to eradicate this social evil. But they do not work sincerely towards this. They need to be sensitive towards this problem. Besides, other non-government organizations and media should come forward to create awareness in masses against this global evil. An addict needs care and affection. Our society should change its attitude. He should be provided with all the support and care. He should be properly rehabilitated. Moral education should be made a part of our curriculum. Society should be made aware from the early stage. Then only we can eradicate this evil.⁷¹

“Cite this article”

T.Mangilal, T. V. Kumari, T.Kavitha “Drug Abuse is a Global Social Evil - Special Reference with Indian Context” Int. J. of Pharm. Res. & All. Sci.2014;3(3):1-9

References

1. American Diabetes Association. Economic Costs of Diabetes in the U.S. in 2002, *Diabetes Care* 26: 917-932, 2003.
2. American Cancer Society. *Cancer Costs: Cancer Facts and Figures*, 2003.
3. Aos, S.; Phipps, P.; Barnoski, R.; and Lieb, R. *The Comparative Costs and Benefits of Programs to Reduce Crime. Volume 4 (1-05-1201)*. Olympia, WA: Washington State Institute for Public Policy, May 2001.
4. Ashery, R.S.; Robertson, E.B.; and Kumpfer K.L., eds. *Drug Abuse Prevention Through Family Interventions*. NIDA Research Monograph No. 177. Washington, DC: U.S. Government Printing Office, 1998.
5. Battistich, V.; Solomon, D.; Watson, M.; and Schaps, E. *Caring school communities*. *Educational Psychologist* 32(3):137–151, 1997.
6. Bauman, K.E.; Foshee, V.A.; Ennett, S.T.; Pemberton, M.; Hicks, K.A.; King, T.S.; and Koch, G.G. *The influence of a family program on adolescent tobacco and alcohol*. *American Journal of Public Health* 91(4):604–610, 2001.
7. Beauvais, F.; Chavez, E.; Oetting, E.; Deffenbacher, J.; and Cornell, G. *Drug use, violence, and victimization among White American, Mexican American, and American Indian dropouts, students with academic problems, and students in good academic standing*. *Journal of Counseling Psychology* 43:292–299, 1996.
8. Botvin, G.; Baker, E.; Dusenbury, L.; Botvin, E.; and Diaz, T. *Long-term follow-up results of a randomized drug-abuse prevention trial in a white middle class population*. *Journal of the American Medical Association* 273:1106–1112, 1999.
9. Bossong, M.G., Van Dijk, J.P. and Niesink, R.J.M. (2005), ‘Methylone and MCPP, two new drugs of abuse?’, *Addiction biology* 10(4), pp. 321–3.
10. Burrell, K., Jones, L., Sumnall, H. et al. (2005), *Tiered approach to drug prevention and treatment among young people*, National Collaborating Centre for Drug Prevention, Liverpool.
11. Chou, C.; Montgomery, S.; Pentz, M.; Rohrbach, L.; Johnson, C.; Flay, B.; and Mackinnon, D. *Effects of a community-based prevention program in decreasing drug use in high-risk adolescents*.

- American Journal of Public Health 88:944–948, 1998.
12. Conduct Problems Prevention Research Group. Predictor variables associated with positive Fast Track outcomes at the end of third grade. *Journal of Abnormal Child Psychology* 30(1):37–52, 2002.
 13. Centers for Disease Control and Prevention. Drug-Associated HIV Transmission Continues in the United States, 2002, available at <http://www.cdc.gov/hiv/>.
 14. Centers for Disease Control and Prevention. Viral Hepatitis C Fact Sheet, 2004, available at <http://www.cdc.gov/ncidod/diseases/hepatitis/c/fact.htm>.
 15. Centers for Disease Control and Prevention. HIV/AIDS Surveillance Report 2002; 14:30, also available at <http://www.cdc.gov/hiv/stats/hasrlink.htm>.
 16. Centers for Disease Control and Prevention. National Vital Statistics Report. Available at http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_12.pdf, Centers for Disease Control and Prevention, Tobacco Information and Prevention Source, Available at <http://www.cdc.gov/tobacco/>, 2003.
 17. Centers for Disease Control and Prevention. National Vital Statistics Report. Available at http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_12.pdf, Centers for Disease Control and Prevention, Tobacco Information and Prevention Source, Available at <http://www.cdc.gov/tobacco/>, 2003.
 18. Dishion, T.; McCord, J.; and Poulin, F. When interventions harm: Peer groups and problem behavior. *American Psychologist* 54:755–764, 1999.
 19. Dishion, T.; Kavanagh, K.; Schneiger, A.K.J.; Nelson, S.; and Kaufman, N. Preventing early adolescent substance use: A family centered strategy for the public middle school. *Prevention Science* 3(3):191–202, 2002.
 20. EMCDDA (2002a), Prosecution of drug users in Europe – varying pathways to similar objectives, European Monitoring Centre for Drugs and Drug Addiction, Lisbon.
 21. EMCDDA (2002b), 'Mortality of drug users in the EU: coordination of implementation of new cohort studies, follow-up and analysis of existing cohorts and development of new methods and outputs', Project CT.00.EP.13, European Monitoring Centre for Drugs and Drug Addiction, Lisbon.
 22. EMCDDA (2004a), 2004 Annual report on the drugs problem in the European Union and Norway, European Monitoring Centre for Drugs and Drug Addiction, Lisbon.
 23. Europol (2006), 'Drugs 2006' (communication to the EMCDDA of 16 January 2006, file no. 158448), Europol, The Hague.
 24. Farrell, M., Gowing, L., Marsden, J. et al. (2005), 'Effectiveness of drug dependence treatment in HIV prevention', *International journal of drug policy* 16S, pp. S67–75.
 25. Gerstein, D.R. and Green, L.W., eds. *Preventing Drug Abuse: What Do We Know?* Washington, DC: National Academy Press, 1993.
 26. Hansen, W.B.; Giles, S.M.; and Fearnow-Kenney, M.D. *Improving Prevention Effectiveness*. Greensboro, NC: Tanglewood Research, 2000.
 27. Hawkins, J.D.; Catalano, R.F.; Kosterman, R.; Abbott, R.; and Hill, K.G. Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Archives of Pediatric and Adolescent Medicine* 153:226–234, 1999.
 28. Hawkins, J.D.; Catalano, R.F.; and Arthur, M. Promoting science-based prevention in communities. *Addictive Behaviors* 90(5):1–26, 2002.
 29. Hibell, B., Andersson, B., Bjarnasson, T. et al. (2004), The ESPAD report 2003: alcohol and other drug use among students in 35 European countries, The Swedish Council for Information on Alcohol and Other Drugs (CAN) and Council of Europe Pompidou Group.
 30. Higgins, S.T., Sigmon, S.C., Wong, C.J. et al. (2003), 'Community reinforcement therapy for cocaine-dependent outpatients', *Archives of general psychiatry* 60, pp. 1043–52.
 31. Institute for Health Policy, ed. *Workplace burden*, In: *Substance abuse: The nation's number one health problem*, Key indicators for policy, Princeton, NJ, The Robert Wood Johnson Foundation, pp. 44–45, 1993.
 32. Jalongo, N.; Poduska, J.; Werthamer, L.; and Kellam, S. The distal impact of two first-grade preventive interventions on conduct problems and disorder in early adolescence. *Journal of Emotional and Behavioral Disorders* 9:146–160, 2001.
 33. Johnston, L.D.; O'Malley, P.M.; and Bachman, J.G. *Monitoring the Future National Survey Results on Drug Use, 1975–2002. Volume 1: Secondary School Students*. Bethesda, MD: National Institute on Drug Abuse, 2002.
 34. Kosterman, R.; Hawkins, J.D.; Spoth, R.; Haggerty, K.P.; and Zhu, K. Effects of a preventive parent-training intervention on observed family interactions: Proximal outcomes from Preparing for the Drug Free Years. *Journal of Community Psychology* 25(4):337–352, 1997.
 35. Kosterman, R.; Hawkins, J.D.; Haggerty, K.P.; Spoth, R.; and Redmond, C. Preparing for the Drug Free Years: Session-specific effects of a universal parent-training intervention with rural

- families. *Journal of Drug Education* 31(1):47–68, 2001.
36. Kumpfer, K.L.; Olds, D.L.; Alexander, J.F.; Zucker, R.A.; and Gary, L.E. Family etiology of youth problems. In: Ashery, R.S.; Robertson, E.B.; and Kumpfer K.L.; eds. *Drug Abuse Prevention Through Family Interventions*. NIDA Research Monograph No. 177. Washington, DC: U.S. Government Printing Office, pp. 42–77, 1998.
 37. Kumpfer, K.L., Molgaard, V. and Spoth, R. (1996), 'The Strengthening Families Program for prevention of delinquency and drug use in special populations', in: Peters, R. and McMahon, R. J. (eds) *Childhood disorders, substance abuse, and delinquency: prevention and early intervention approaches*, Sage Publications, Newbury Park, CA.
 38. Lester B. Prenatal Cocaine Exposure and 7-Year Outcome: IQ and Special Education, Presentation at the Society for Pediatric Research Meeting, Washington, DC, 2003.
 39. McGinnis JM, and Foege WH. Mortality and morbidity attributable to use of addictive substances in the United States. *Proc Assoc Am Phys* 111(2): 109-118, 1999.
 40. Mick E, Biederman J, Faraone SV, Sayer J, and Kleinman S. Case-control study of attention-deficit hyperactivity disorder and maternal smoking, alcohol use, and drug use during pregnancy. *J Am Acad Child Adolesc Psychiatry* 41(4):378-385, 2002.
 41. Miller WR, Sanchez VC. Motivating young adults for treatment and lifestyle change. In: Howard G, editor. *Issues in alcohol use and misuse in young adults*. Notre Dame: University of Notre Dame Press; 1993. pp. 55–82.
 42. Moon, D.; Hecht, M.; Jackson, K.; and Spellers, R. Ethnic and gender differences and similarities in adolescent drug use and refusals of drug offers. *Substance Use and Misuse* 34(8):1059–1083, 1999.
 43. National Highway Traffic Safety Administration. *Drug Impaired Driving*. Available at <http://www.nhtsa.dot.gov/people/outreach/safesobr/15qp/web/iddrug.html>, 1997.
 44. National Institute on Drug Abuse. *NIDA Probes the Elusive Link Between Child Abuse and Later Drug Abuse*. Available at [/NIDA_Notes/NNVol13N2/DirrepVol13N2.html](http://NIDA_Notes/NNVol13N2/DirrepVol13N2.html), 1998.
 45. National Institute on Drug Abuse (NIDA), National Pregnancy and Health Survey: *Drug Use Among Women Delivering Livebirths: 1992* (National Institutes of Health, Publication No. 96-3819, NIH, Rockville, MD, 1996).
 46. National Center on Addiction and Substance Abuse at Columbia University (CASA). *Behind bars: Substance abuse and America's prison population*, New York, CASA, 1998.
 47. Office of National Drug Control Policy (ONDCP). *The Economic Costs of Drug Abuse in the United States 1992-1998*. NCJ-190636, 2001.
 48. Ockene IS, and Miller NH. Cigarette Smoking, Cardiovascular Disease, and Stroke. *Circulation* 96:3243-3247, 1997.
 49. Office of National Drug Control Policy (ONDCP). *Homelessness and drug abuse in The National Drug Control Strategy 2000 Annual Report*.
 50. Palmgreen, P.; Donohew, L.; Lorch, E.P.; Hoyle, R.H.; and Stephenson, M.T. Television campaigns and adolescent marijuana use: Tests of sensation seeking targeting. *American Journal of Public Health* 91(2):292–296, 2001.
 51. Pentz, M. A. Costs, benefits, and cost-effectiveness of comprehensive drug abuse prevention. In: Bukoski, W.J., and Evans, R.I., eds. *Cost-Benefit/Cost-Effectiveness Research of Drug Abuse Prevention: Implications for Programming and Policy*. NIDA Research Monograph No. 176. Washington, DC: U.S. Government Printing Office, pp. 111–129, 1998.
 52. Plested, B.; Smitham, D.; Jumper-Thurman, P., Oetting, E., and Edwards, R. Readiness for drug use prevention in rural minority communities. *Substance Use And Misuse* 34(4 and 5):521–544, 1999.
 53. Poling, J., Oliveto, A., Petry, N. et al. (2006), 'Six-month trial of bupropion with contingency management for cocaine dependence in a methadone-maintained population', *Archives of general psychiatry* 63, pp. 219–28.
 54. Reitox national reports (2005) (<http://www.emcdda.europa.eu/?nnodeid=435>).
 55. Roe, E. and Becker, J (2005), 'Drug prevention with vulnerable young people: a review', *Drugs: education, prevention and policy*, 12(2), pp. 85–99.
 56. Roozen, H.G., Boulogne, J.J., van Tulder, M.W. et al. (2004), 'A systematic review of the effectiveness of the community reinforcement approach in alcohol, cocaine and opioid addiction,' *Drug and alcohol dependence* 74, pp. 1–13.
 57. Rice DP. Economic Costs of Substance Abuse, 1995. *Proc Assoc Am Phys* 111(2): 119-125, 1999.
 58. Schäfer, C. and Paoli, L. (2006), *Drogenkonsum und Strafverfolgungspraxis*, Duncker & Humblot, Berlin.
 59. Substance Abuse and Mental Health Services Administration. Office of Applied Studies, *An Analysis of Worker Drug Use and Workplace*

- Policies and Programs: Results from the NHSDA, 27, 1994 and 1997.
60. Srivastava A. Pal HR. Dwivedi SN, et al. National household survey of drug abuse in India. Report submitted to the Indian Ministry of Social Justice and Empowerment and the United Nations Office for Drugs and Crime. 2003.
 61. Scheier, L.; Botvin, G.; Diaz, T.; and Griffin, K. Social skills, competence, and drug refusal efficacy as predictors of adolescent alcohol use. *Journal of Drug Education* 29(3):251–278, 1999.
 62. Spoth, R.; Guyull, M.; and Day, S. Universal family-focused interventions in alcohol-use disorder prevention: Cost effectiveness and cost-benefit analyses of two interventions. *Journal of Studies on Alcohol* 63:219–228, 2002.
 63. Spoth, R.L.; Redmond, D.; Trudeau, L.; and Shin, C. Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. *Psychology of Addictive Behaviors* 16(2):129–134, 2002.
 64. Thornton, T.N., et al., eds. *Best Practices of Youth Violence Prevention: A Sourcebook for Community Action*. Atlanta, GA: Centers for Disease Control and Prevention, September 2000.
 65. Toschke AM, Montgomery SM, Pfeiffer U, von Kries R. Early intrauterine exposure to tobaccoinhaled products and obesity. *Am J Epidemiol* 158(11):1068-1074, 2003.
 66. U.S. Department of Health and Human Services. National Center on Child Abuse and Neglect, *Protecting Children in Substance Abusing Families*, 1994.
 67. U.S. Department of Education, Office of Special Education Research and Improvement, Office of Reform Assistance and Dissemination. *Safe, Disciplined, and Drug-Free Schools Programs*. Washington, DC, 2001.
 68. Webster-Stratton, C. Preventing conduct problems in Head Start children: Strengthening parenting competencies. *Journal of Consulting and Clinical Psychology* 66:715–730, 1998.
 69. Webster-Stratton, J.; and Hammond, M. Preventing conduct problems, promoting social competence: A parent and teacher training partnership in Head Start. *Journal of Clinical Child Psychology* 30:282–302, 2001.
 70. Wills, T.; McNamara, G.; Vaccaro, D.; and Hirky, A. Escalated substance use: A longitudinal grouping analysis from early to middle adolescence. *Journal of Abnormal Psychology* 105:166–180, 1996.
 71. Wakschlag LS, Pickett KE, Cook E Jr, Benowitz NL, Leventhal BL. Maternal smoking during pregnancy and severe antisocial behavior in offspring: a review. *Am J Public Health* 92(6):966-974, 2002.
-