MODULE I:

Basic Concepts in

Drug Addiction

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MODULE 1
BASIC CONCEPTS IN DRUG ADDICTION

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SUMMARY

Since prehistoric times people have turned to drugs to lessen physical pain or alter their state of consciousness. Drug use was generally limited to people who had reached maturity or very particular situations. Currently, drug use and abuse is a very serious social and public health problem that generates great social concern. This is due to the widespread drug consumption in many sectors of the population, the decline in the age of usage initiation and the severity of the individual and community consequences of the phenomenon on the three levels considered in the current concept of health: physical, psychological and social. If a few years ago, speaking of the drug problem usually alluded to illegal drugs such as heroin, currently the concern has focused on the consumption of legal drugs such as alcohol and tobacco, which are considered the gateway to the consumption of other substances. Alcohol and tobacco are also considered the gateway to the use of substances whose consumption is increasing, cannabis and cocaine.

During the last two decades, drug abuse prevention programs have evolved considerably. Pharmacological and psychological treatments have also progressively improved. Nevertheless, preventive and therapeutic action, given the continuous change and complexity of the phenomenon, is still insufficient.

This chapter introduces some basic concepts in the addictions field. We review aspects such as the definition of drugs and addictive behavior, consumption patterns and the current status of the problem. Also presented are the criteria used to determine whether consumption or abuse of a substance is taking place. Finally, we review the main individual risk factors that favor substance consumption and integrate them into a comprehensive model.

UNIT 1: HOW DRUGS WORK

Drug consumption behavior is the same as all other maladaptive behavior: it is the result of a complex interaction of personal and environmental factors.

Moreover, in this case, the added difficulty of the effects a given psychoactive substances has on the body must be considered. To understand the magnitude of the phenomenon it is necessary to know the basic physiological correlates of drug consumption. In this first unit general concepts on the pharmacodynamics and pharmacokinetics of drug consumption are addressed. The characteristics of the main psychoactive substances and their psychoactive effects and mechanisms are also presented.

1.1. Drug Concept

The World Health Organization (WHO) defines drug as *any substance which, introduced into the living organism can modify one or more of its functions*. The presence of drugs in many civilizations goes back to time immemorial. Greeks and Romans deified wine with the figures of Dionysus and Bacchus, respectively. Historically, drugs have been linked to magical–religious rituals, celebrations and social events. Gradually their use became widespread in other contexts. Some of these substances are natural in origin, as is the case with tobacco or cannabis. Others are the result of chemical processes carried out using natural products, like what occurs with alcoholic beverages, which are obtained from the fermentation or distillation of grain or fruit juice. Drugs are also produced artificially. This is the case for drugs for psychiatric use or for synthetic drugs.

1.2. Drug Classification

Several criteria have been used when classifying drugs. Based on compliance with laws, drugs are classified as legal (e.g., alcohol, tobacco, coffee, hypnotics, sedatives, inhalants, etc.) and illegal (e.g., opiates cannabis, cocaine, synthetic drugs, hallucinogens, etc.). There has also been a differentiation between soft and hard drugs, although currently that distinction is rarely used because of its scant utility and the fact that it can give rise to the erroneous interpretation that so-called soft drugs are not quite detrimental to health. Another classification criterion is based on the effect produced in the central nervous system (CNS). Thus, Chalout (1971) proposed a typology that distinguishes between drugs that are depressants, stimulants and perturbers of the CNS. Table 1 provides a complete account based on this criterion. The first group includes alcohol, opiates and psychotropic drugs such as hypnotics, anxiolytics and antipsychotics. Among the second group are major alertness stimulants (e.g., amphetamines and cocaine) and minor alertness stimulants (e.g., caffeine and nicotine), and mood

boosters (antidepressants). In the third group, consisting of psychedelic drugs, are hallucinogens, cannabis, synthetic drugs and solvents (e.g., glues, adhesives, etc.).

Table 1. Classification of drugs according to their main effects

1. Central Nervous System Depressants

    a) Alcohol

    b) Hypnotics: Barbiturates and non–barbiturates

    c) Anxiolytics: diazepam

    d) Narcotic analgesics:

        i.   Opium and derivatives: Heroin, morphine, codeine, etc.

        ii.   Synthetic narcotics: methadone, etc.

    e) Antipsychotics (major tranquilizers)

2. Central Nervous System Stimulants

    a) Alertness stimulants.

        i.   Major: amphetamines, cocaine

        ii.   Minor: nicotine, xanthenes (coffee, tea, cocoa, etc.)

    b) Mood Boosters: antidepressants

3. Central Nervous System Perturbants (psychedelic)

    a) Hallucinogens: mescaline, LSD, etc.

    b) Derivatives of cannabis: marijuana, hashish

    c) Volatile solvents: glue, etc.

    d) Designer drugs: MDA, MDMA, etc.

The definition of drug and addictive behavior is related to other basic terms. The first involves distinguishing between the use and abuse of a substance. We understand drug use to be drug consumption that does not negatively impact health. Drug consumption becomes abusive at the appearance of dependence, which is defined as the set of physiological, behavioral and cognitive manifestations in which the use of a drug is a priority for the individual. This term is usually linked to *tolerance*, or the need to consume more of a substance to achieve the effects of previous consumption.

When a dependent person does not consume, withdrawal syndrome appears. It is a cluster of symptoms that affect an individual who is suddenly deprived of any toxin or drug on which he/she is physically dependent and which previously had been consumed on a regular basis. The quantity of symptoms, as well as their intensity and duration will depend on the type of drug, the length of time the person has consumed the substance and his/her physical and psychological state at the time of withdrawal.

Physical dependence is a state of adaptation of the organism to the presence of the drug and is manifested by the appearance of intense physical discomfort (tremors, chills, insomnia, vomiting, pain in the muscles and bones, etc.) when consumption of the substance is stopped. This same physical discomfort occurs when the substance´s action on the organism is influenced by drugs designed to block its effects. *Psychological dependence* refers to the situation in which a person feels an emotional need and urge to consume a drug on a regular basis in order to feel good, be satisfied (obtain pleasure or avoid discomfort) although he/she does not need the substance physiologically. This may be associated with different contexts or social interactions.

Addictions go beyond substance use. There are the so-called non-toxic addictions which involve dependency behavior with an evident syndrome of psychological withdrawal. There is, for example, addiction to gambling or pathological gambling and others such as technological addictions (internet, mobile, and video games), addiction to shopping, exercise or sex. These addictive behaviors share, if not all, some of the characteristics mentioned so far, with the peculiarity that there is not a mediating substance that produces physical changes in the subject.

1.3. Effects of Drugs

As already mentioned, drugs act on the central nervous system (i.e., they affect the individual's neurological functioning). The physiological correlates and effects vary according to each substance; there are specific mechanisms that involve precise receptors for each substance type. In this section we present some common aspects to the physiological effects of drugs.

When a substance enters the body it first affects the neuronal receptors, which are structures located within a neuron or in its membrane and are characterized by selective binding to a substance and the physiological effect that accompanies the union.

The presence of a drug in the body affects the presynapse, altering the production/ release of neurotransmitters. During the next step, the drug affects the synapses, by increasing the presence of neurotransmitters in the synaptic space. There can be a reuptake inhibition, blockade of reuptake channels, or inhibition of degradation.

The activity of the drug in the body over a period of time comprises the processes of absorption, distribution, localization in tissues, biotransformation and excretion.

Physical dependence emerges as the need to maintain certain levels of a substance in the body. Therefore, it involves the development of a drug–organism link and neuroadaptation process.

1.3.1. Central Nervous System Depressants

Alcohol

The two main types of alcohol based on their chemical composition are: methyl alcohol (methanol), which is the simplest of the alcohols and is used as a solvent, antifreeze and in industrial applications; and ethyl alcohol (ethanol), which is what alcoholic beverages contain. Ethyl alcohol is obtained through the fermentation of sugars from different plants. After the distillation process, the amount of alcohol can be concentrated and significantly increased. From a physical standpoint, the short term effects of alcoholic beverage intake are impaired balance, movement, speech and vision, hurried and unintelligible expression, decreased ability to concentrate, drowsiness, and despondency, irritability, nausea, vomiting and/or headaches.

Chronic alcohol consumption leads to serious physical and psychological problems.

a) Physical problems:

The mortality attributed to diseases brought about by alcohol abuse is estimated at between 20,000 and 25,000 cases per year. Some of the physical problems related to alcohol abuse occur in the short term. Others, however, such as coronary heart disease appear after ongoing use. Alcohol, consumed abusively, is harmful to all the body´s organs. Among the consequences at the physical level the following stand out:

- Alcoholic dependency syndrome or alcoholism.

- Digestive tract disorders (esophagus and stomach): gastritis, gastrointestinal bleeding, varices in the esophagus, etc.

- Pancreas: pancreatitis, diabetes, etc.

- Liver disease: cirrhosis, hepatitis, etc.

- Cancers: considered the second leading cause of death among alcoholics. The most common types are of the stomach, esophagus, liver and pancreas.

- Cardiovascular disorders: cardiac abnormalities such as arrhythmias or mitral valve insufficiency are associated with the prolonged use of alcohol.

- Malformations in the fetus: the use of any toxic substance, including alcohol, provokes alterations in fetal development, and may even cause an abortion. In the case of mothers who consume alcohol, a condition known as *fetal alcohol syndrome* appears. Children with this syndrome show morphological changes in the head, skeleton, heart and genitals, as well as mental retardation in approximately 50% of cases.

- Neurological disorders: various types of brain damage, such as Korsakoff's Syndrome, have been found to result from a history of alcoholism.

b) Psychological problems:

- Acute alcohol intoxication (drunkenness): although alcohol is a neurological depressant, at low doses it produces a generalized

behavioral disinhibition, euphoria, talkativeness and attention loss. When ingested in higher quantities, it brings about greater motor incoordination, aggression and loss of consciousness. Alcohol poisoning can lead to coma and even death.

– Alcohol withdrawal syndrome: it can appear at any point after 24 hours of last use, with symptoms ranging from tremors, nausea, sweating and vomiting, to hallucinatory syndrome known as *delirium tremens*.

– Alcohol dementia: entails an overall intellectual deterioration. It is estimated to affect between 50% and 70% of alcoholics (Caballería, Caballería y Parés, 1996).

– Depression: often alcohol acts as an antidepressant and anxiolytic, but simultaneously can cause rebound anxiety and a greater degree of major depression with strong feelings of guilt (De la Serna, 1996).

– Suicides: various authors have written about the relationship between alcohol abuse and suicide. Thus, Pons y Berjano (1999) note that about half of suicide attempts in women and two thirds in men occur under the influence of alcohol.

– Alcoholic jealousy: also known as alcoholic paranoia, characterized by delusions of infidelity. In males, this disorder is related to impotence caused by alcoholism, which affects the alcoholic's self-esteem and encourages him/her to think that his/her partner is unfaithful (De la Serna, 1996; Secades, 1996).

– Other problems: occasionally, bouts of anxiety occur, such as panic disorder (Segui et al., 1995), or memory disorders (Tovar, 1995).

c) Social Problem

– Traffic accidents: the risk of an accident increases because of reflex loss, disinhibition and sensation of control, euphoria and perceptual deficits caused by the alcohol (Montoro, 1991). According to Romero (1994), up to 60% of traffic accidents occur from the following combination: young people- alcohol – weekend.

– Family problems: the alcoholic's family suffers a disruptive process parallel to that suffered by the patient (Casas, 1998). The alcohol abuse is

often associated with abuse, domestic violence and couple breakup (Carvalho et al., 1995; Santodomingo, 1998).

– Labor problems: as a consequence of repeated alcohol consumption there is a decreased job performance, increasing the risk of workplace accidents, absenteeism and sick leave. In the long run, individuals addicted to alcohol often lose their jobs (Moreno, Portús and Arias, 1995).

– Alcohol and the consumption of other drugs: alcohol is a "gateway" drug to the use of other substances. According to some studies (Arévalo et al., 1997, Comas, 1985), users of a particular drug have previously used other substances, with the usual chain being: alcohol → tobacco → cannabis → other illegal drugs. It has also been observed that the intensity of alcohol consumption is one of the variables related to the use of other illegal drugs, such that the earlier the consumption of alcoholic beverages begins, the more substances will be used later (Secades, 1996).

Adverse effects of alcohol in the juvenile population

The negative repercussions of alcohol poisoning are numerous. According to the National Drug Plan of Spain, 28.5% of students have suffered negative consequences associated with alcohol consumption, mainly health problems, quarrels, arguments and family conflicts. Among the negative consequences that young people may specifically suffer the following stand out:

– School problems: alcohol consumption among boy and girl students has consequences that directly impact on their academic performance. Various studies (Perula et al., 1998; Vega, 1987) find a relationship between academic failure and alcohol consumption. Among the students who have never repeated a course there is a higher proportion of abstainers than among repeaters.

– Unplanned Sex: sex between adolescents often occurs during the weekend, as does alcohol consumption. Jacobson, Aldalna and Beaty (1994) affirm that 25% of teens had been drinking before their last sexual experience. There is growing information on HIV/AIDS and unwanted pregnancies, and greater accessibility to condoms and other contraceptives. However, intoxication may act as a barrier to

implementing the knowledge and attitudes about health behaviors (Cooper et al., 1994).

– Traffic accidents: everything said in reference to the general population is applicable here.

– Legal problems: many authors have verified the relationship between alcohol and criminal behavior (Bartual, Bardisa, Lopez and Garcia-Rodriguez, 2000, Fergusson, Horwood, and Linskey, 1996, Otero-Lopez, Romero and Luengo, 1994; Vega 1989). Graña and Munoz (2000) found that among adolescent consumers there was a higher probability of carrying out pre-delinquent activities. Other studies, such the one by Basabe and Páez (1992) confirm the co-morbidity between alcohol consumption and antisocial behavior, finding that 11% of adolescents have relationship problems caused by alcohol in the form of fights and quarrels with friends, and 12% with other people. In turn, Calafat et al. (2000) found that antisocial behaviors most frequently associated with drugs and the weekend was driving without a license (18.4% of respondents had done so over the last year and 19.5% had done so at least once since the age of fifteen), deliberately damaging public property (19.2%), shoplifting (34.6%), and engaging in physical fights (32.3%).

Opiates

Opium is a narcotic drug obtained from a type of poppy originating in Asia Minor and known as white opium. The psychoactive effects are produced by the alkaloids contained in opium, which can be classified into two types depending on the action they produce and their chemical composition:

– Morphine, codeine, thebaine, which act on the nervous system. They are analgesics, narcotics, and addictive.

– Papaverine, which acts on the muscular system resulting in relaxation. It is non addictive.

Morphine is the principal alkaloid found in opium. It is a psychodysleptic, a substance that disrupts mental activity and acts as a powerful painkilling sedative and anxiolytic. The mechanism of action of morphine is based on the presence of opioid receptors in the Central Nervous System of the human body. When

morphine enters the body, it accumulates in the tissues through the blood, acting on said opiate receptors and affecting the Central Nervous System, smooth muscles of the abdominal organs and skin. Among the most noted effects of morphine are analgesia, drowsiness, mood changes and mental confusion. Morphine also has a miotic effect: pupils decrease notably in size.

Heroin is a semi–synthetic substance derived from morphine after a process of acetalization. Its effects are more potent than morphine. It is capable of producing tolerance after a few doses and causing significant psychological and physical addiction.

Barbiturates and Tranquilizers

These two broad groups of substances are capable of diminishing Central Nervous System activity. Both create physical and psychological dependence. Barbiturates are drugs derived from barbituric acid. Depending on the dose and formula it may have sedative, hypnotic, anticonvulsant, or anesthetic effects. Tranquilizers or benzodiazepines are a group of substances used in the treatment of sleeping problems and anxiety. They are chemical compounds related to benzoic acid and diazepine. They are also known by the names of sedatives, tranquilizers and anxiolytics. Benzodiazepines have a sedative and anxiolytic effect. Both barbiturates and tranquilizers produce a very high dependency, and in the case of an interruption of their administration withdrawal syndrome appears.

1.3.2. Major Stimulants of the Central Nervous System.

Amphetamines

Amphetamine is a synthetic compound chemically derived from ephedrine, a natural alkaloid with euphoretic properties. Amphetamines cause variable psychological dependence and low physical dependence and generate tolerance rapidly. The effects of low or moderate doses are: a state of euphoria, sleep loss, decreased appetite, perception of an apparent improvement of overall fitness, increased breathing rate, and bronchial dilation, dry mouth and increased blood pressure and body temperature. Prolonged use or high doses cause irritability and paranoia, hallucinations and delirium, respiratory and cardiac abnormalities and seizures.

Cocaine

Cocaine is hydrochloride of cocaine, the result of a chemical process using coca plant leaves. The main physical effects include tachycardia, hypertension, tremors, increased body temperature and sweating. The psychological effects are related to states of euphoria, a sense of energy, more intense sensations of the senses and increased self-esteem.

The major psychological problems resulting from cocaine use are reactive depression when consumption is suppressed or the cocaine psychosis that can spontaneously occur.

1.3.3. Minor stimulants of the Central Nervous System

Nicotine

Nicotine stimulates the Central Nervous System and has a vasoconstrictor effect on some internal organs such as the heart. The effects of tobacco gradually increase with time and consumption. Principal among the physical effects are increased heart and respiratory rates, arrhythmia and hypertension. While the major immediate psychological effects include increased alertness, concentration and memory, and stress reduction.

The prolonged use of tobacco is associated with the onset of cardiovascular diseases, circulatory failure and cancers of the lung, oral cavity, larynx, esophagus and duodenum.

Xanthines (caffeine, tine, etc)

Chemical elements that are derived from purine, present in the nucleic acid of living cells. This group includes caffeine, theophylline and theobromine, which is found in various plants, such as coffee, tea, or cocoa. Caffeine intake by sporadic consumers or by people not accustomed to it has physical and psychological effects that manifest in better physical performance, stimulation of the psychic functions, facilitation of intellectual effort, and improved attention and concentration; however, it can also produce negative effects such as nervousness, excitement, tremors and restlessness. Among the most important effects of a high consumption of these substances are anxiety, sleeping problems, excitability, hypertension and upset stomach.

Hallucinogens

Included in this group of substances are those that produce alterations in perception and thought processes. They can cause hallucinations and sensory

confusion. There are natural hallucinogens such as Atropa Belladonna (belladonna) or Atropa Mandragora (mandrake). There are also synthetic ones, such as lysergic acid diethylamide (LSD). The psychedelic acetylcholine acts on the acetylcholinesterase, the enzyme responsible for connecting the brain to the peripheral nervous system. Included in this group are physostigmine, atropine and scopolamine. The psychedelic norepinephrine acts on norepinephrine, neurons that act as chemical transmitters. In this group are some synthetic drugs such as MDMA (ecstasy), mescaline, myristicin and elemicin. The psychedelic serotonin acts on serotonin, a neurotransmitter that regulates the functioning of the period of sleep and sensory perception. Included among them are lysergic acid diethylamide (LSD), dimethyltryptamine (DM), psilocybin and psilocin, or bufotenin. Among the psychedelic anesthetics are phencyclidine and ketamine.

The physical effects of hallucinogens include dilated pupils, increased body temperature and blood pressure, dizziness, nausea, somnolence and paresthesias. Psychological effects include possible panic attacks and depressive disorders after experiencing the effects of the substance.

Cannabis

Cannabis is the name of the Indica variety of *Cannabis Sativa* or hemp plant. The psychoactive component of the plant is THC (tetrahydrocannabinol). *Cannabis sativa* results in three different types of substances depending on the preparation and elaboration: marijuana, hashish and hashish oil. Marijuana is the most common form because the whole plant is utilized, drying it and then finely grinding the stems, leaves and flowers for later compression. It is then normally smoked, alone or mixed with common tobacco. Hashish has higher concentration of THC, reaching as high as 20%. Hashish is also normally consumed by smoking it. Hash oil has the highest intoxication power as it contains up to 70% of THC. It is chemically obtained by distillation, mixing hashish with solvents.

The most notable effects of cannabis consumption are muscle relaxation, which can cause problems with coordination and balance, decreased muscle strength, and dilation of blood vessels, which causes the eyes to turn red. Other effects are increased pulse and heart rate, dry mouth and minor salivation. The long-term physical and psychological effects are: respiratory diseases, anxiety and panic disorder, disruption to appetite and sleeping patterns, diminished judgment and reflexes and impaired memory and concentration.

Inhalants

An inhalable substance is any which when in contact with the air releases chemicals that affect the normal functioning of the brain. Inhalants enter the bloodstream by means of breathing, which produces instantaneous effects on the brain. In addition, the pulmonary route prevents the substance from passing through the liver, such that high blood concentrations are obtained. The mechanism of action of inhalants is based on its composition (volatile liquids or gases of high lipid solubility) that enables them to act upon the Central Nervous System. These may be products for domestic or industrial use such as gasoline, glues, paints, varnishes and lacquers, etc.

Synthetic drugs

Synthetic drugs (or designer drugs) are substances that are obtained by chemically synthesizing other drugs. Usually they are derived from drugs that, because of their contraindications, have not come into use or whose use was abandoned due to having scant therapeutic interest. There are five basic groups of this type of drug (Julien, 1995, O'Brien and Cohen, 1984):

– Amphetamine derivatives: obtained by replacing some of the molecular groups of the basic structure of phenylalkylamine. The most popular synthetic drugs belonging to this group are methamphetamine (speed), MDA, PMA, MMDA, MDMA (ecstasy), DOM, DOB, MDEA, etc.

– Synthetic opiates or opioids: narcotics with similar action to opium and morphine. Derivatives include fentanyl, such as synthetic heroin and meperidine analogues, such as the MPPP and MPTP.

– Phencyclidine analogs, including phencyclidine (PCP) (commonly known as angel dust) and ketamine. Both have analgesic–anesthetic effects.

– Methaqualone derivatives: it is a neurodepressor synthesized in 1951 that was used as a hypnotic and anxiolytic.

– Other drugs difficult to classify: sodium oxybate, used in the UK, which increases the effects of ethanol, aminorex, CNS stimulant with effects similar to amphetamines, and methcathinone and ephedrone, structurally similar to ephedrine and methamphetamine.

Of these the best known is the ecstasy, or MDMA (3, 4 methylenedioxymethamphetamine). This substance was synthesized in 1912 and patented in 1914 as an anorectic drug, but was never marketed as such. During the seventies it was used as an aid in psychiatric treatment; a use that was subsequently banned (Macia, 2000). Its non-therapeutic use, closely linked to the New Age movement, began to spread in California. Followers of this movement used MDMA as a tool for spiritual growth. In the early eighties its use became widespread in clubs and dance halls, linking ecstasy consumption to musical movements such as acid house, trance, techno, hardcore, etc.

MDMA, being a derivative methamphetamine, possesses stimulant and psychedelic properties. Its consumption causes an elevation in blood pressure and heart rate. The main subjective effects are a mood boost and reduced feelings of fatigue and appetite. Although the stimulant effects predominate, hallucinatory effects are not rare, although disorientation and perceptual distortions are smaller than those of classical hallucinogens such as lysergic acid (Becoña and Vazquez, 2001). It is usually taken orally in pill form. There is not a unanimous agreement regarding its capacity to create addiction; although the DSM-IV (APA, 1994) is gathering the criteria for dependence and abuse of amphetamines and related substances (National Drug Plan, 2002), which would consist in a gradual decrease in the capacity to meet work and family obligations, and stressful situations. In any case, synthetic drugs have the ability to produce tolerance after a period of continuous administration. Such that when the consumption is abandoned, symptoms such as increased aggressiveness sleep disturbances, fatigue or depressed mood can appear.

According to the National Observatory on Drugs (OED, 2000), 60% of ecstasy users had problems associated with their consumption. The principal repercussion associated with the consumption of synthetic drugs is sleeping problems, symptoms experienced by up to 35.7% of consumers. Mood problems such as irritability and sadness are experienced by 12% of subjects who consume. The problems associated with use of synthetic drugs, depending on, among other factors, the predisposition of the individual consumer, can be grouped into three broad categories: physical, psychological and other.

The majority of the cases of death associated with MDMA use involve a process called *heat stroke* (Melero, 1996). It is a result of the hyperthermic effect of the substance, the heat of the places where it is consumed, and the continuous exercise and lack of fluid in the body. It is characterized by fatigue,

dizziness, difficulty urinating, lack of sweating and cramps. Other physical hazards related to the use of ecstasy are hyperthermia, stroke or acute hepatic failures.

In the DSM-IV, MDMA is included in hallucinogen use disorders, although, as Becoña and Vazquez (2001) point out, given that ecstasy behaves more like an amphetamine derivative, it can be considered as a amphetamine use disorder. Ecstasy has been linked to the occurrence of panic attacks, and depressive and psychotic disorders (Bobes, 1995; Teran, 1995). Ecstasy consumption has also been linked with the emergence of suicidal ideation (National Drug Plan, 2002).

UNIT 2: THE STATE OF THE MATTER: HOW MUCH DRUG USE IS THERE

Europe has a strong background in tracking drug use. Owing to continuous and systematic work, a wide and extensive epidemiological network accumulates data collected through a sophisticated system of indicators. This chapter describes the information collection systems and analyzes their results.

2.1. Epidemiology in Addictions

Epidemiology is the study of diseases and disorders that affect a large number of people in a population. Epidemiology deals with two basic concepts which are prevalence and incidence. *Prevalence* is understood to mean the percentage of people with a disorder in a given population and at a particular point in time. Prevalence is estimated using the following formula:

Prevalence= (Number of cases with disorder/Total number of cases evaluated) x 100

The term *incidence* is used to analyze the emergence of new cases of a disorder over a period of time in a population. The formula used to calculate cumulative incidence is:

Incidence = (Number of new cases in the monitoring/Total subjects evaluated) x 100

2.2. Prevalence of Substance Consumption in the School Population

Epidemiological research on drug use has two characteristics that determine the information it provides. The first deals with measurement variables. At times, objective measures, such as the quantity of drug consumed, have been employed; while on other occasions consumption has been assessed by

quantifying the number of episodes of drunkenness. It is most common to describe measurements as a percentage of adolescents who consume. The second characteristic refers to the instruments used to gather information. To that effect, the use of self-reporting techniques by means of, questionnaires, surveys, or through interviews predominates. Due to the technical difficulty and cost involved, methods that evaluate physiological responses (e.g., carbon monoxide breath test to assess the tobacco use in a population participating in a preventive program) are rarely used. This conditions the subsequent interpretation of the information, which may be affected by inherent biases of self-report measures. Having made these clarifications, we will now discuss the main and most recent epidemiological studies on substance use.

The Spanish National Plan on Drugs carries out on a biannual basis the *Survey on Drugs School Population*, aimed at high school students aged between 14 and 18 years of age. From the latest survey, which covered a sample of more than twenty thousand students in Spain, several conclusions can be draw about current trends in the consumption of drugs:

The consumption pattern among schoolchildren continues to be experimental or occasional, mainly associated with recreational contexts.

- Alcohol and tobacco are the substances most consumed by students, with rates of 76% and 34% respectively of teens who have tried them

- In all illegal drugs, the proportion of consumers is higher in boys. Girls consume tobacco, tranquilizers and alcohol more often than boys, although in lesser quantities.

- Alcohol consumption is mainly limited to the weekend. Almost 43% of schoolchildren who had consumed alcohol within the last month did so exclusively on the weekend. Nearly 40% reported having been drunk before.

- Among psycho-stimulants, ecstasy is the substance with the highest proportion of regular users (2.5%)

- Alcohol and tobacco consumption are those with the highest continuity or loyalty. The percentage of students who having previously used alcohol or tobacco repeated use of these substances in the past 30 days is respectively 89% and 76%. Substances such as cannabis (62%) or ecstasy (44%) also registered a high continuity in their use.

The state survey report on drug use in secondary school students (National Plan on Drugs 2006-2007) reveals the fact that after several consecutive years of increased consumption of alcohol, tobacco and cannabis, there has been a significant reduction and deceleration in the consumption of most substances in youths (15-18 years old). The report concludes with the following points.

The most consumed drugs by secondary school students aged 14 to 18 are alcohol, cannabis and tobacco. 79.6% had consumed alcohol at some point in their life; while 46.1% had done so for tobacco and 36.2% for cannabis. The proportion of current users of these substances, (i.e., those who had consumed them in the 30 days preceding the interview was 58%, 27.8% and 20.1%, respectively. The consumption of other substances (cocaine, ecstasy, hallucinogens, amphetamines, volatile substances, heroin, etc.) is far smaller, at between 1% and 6% the proportion of students who have ever tried them and between 0.5% and 2.3% the proportion of current consumers.

Comparing these results with those of previous surveys, we see a reduction in the consumption of most substances, more pronounced in the case of tobacco, cannabis and cocaine. On the other hand, the latter two substances are the most prevalent illegal drugs and those whose consumption had most grown in recent years.

Tobacco consumption by adolescents is linked to incisive and targeted advertising campaigns by tobacco companies seeking new addicts in the face of middle-aged people who quit smoking because of health problems or on medical advice. A close second to tobacco usage is that of cannabis. Because of the high level of consumption in youth, a specific culture that surrounds it and a certain industry catering to its usage (magazines, products, music, etc.), cannabis has increasingly become an almost normalized drug.

– Alcohol and tobacco are the first and second most consumed psychoactive substances, with 82% and 60.40% respectively of adolescents who have tried them;

– Tobacco and alcohol consumption are those with the greatest continuity or loyalty;

– Alcohol consumption is basically limited to the weekend (65.60% of those who drank alcohol in the last 30 days restricted it exclusively to the weekend);

− The pattern of alcohol abuse among adolescents has increased (the prevalence of binge drinking in the 30 days preceding the survey increased from 20.70% in 1994 to 34.80% in 2004);

− Girls consume legal drugs more frequently but in smaller amounts than boys;

− Smoking has a significant presence among schoolchildren, with 21.50% of the students being daily smokers,

− There are accentuated gender differences regarding the rate of tobacco consumption, which is higher in girls. A trend that seems to be confirmed in the recent study by Delgado et al. (2005).

Alcohol Consumption

The average age of initiation is 16.7 (men 15.9 and women 17.7). The consumption of all groups of alcoholic beverages is higher during the weekend (Friday, Saturday and Sunday). For groups of beverages, according to alcohol content, beer and cider are the most consumed during the weekend (20.8%), followed by wine / champagne (15.9%) and combined/mixed drinks (10.8 %). The consumption of beer/cider is higher among men, being the most common between the ages 35 and 44 (24.4%). The most widely consumed beverages on weekdays are the wine/champagne, 10.4% had drunk it every working day, with much greater consumption among men. The measure of consumption of this substance is highly complicated because of the variety of beverage types, containers, consumption patterns and situations in which alcohol is drunk. This makes recall and information integration more difficult. There is also the added difficulty of establishing a definition clearly understood by all regarding what it means to consume alcoholic beverages.

In short, the latest data from the National Drug Plan of Spain show:

a) Spanish adolescents begin drinking at 13.7 years old.

b) Boys and girls consume alcohol in similar ways on weekends.

c) Among minors getting drunk every weekend is increasingly common.

d) Among adolescents who consume alcohol, the use of cannabis, cocaine and other drugs is more frequent.

e) Most teens do not consider alcohol consumption dangerous.

Cannabis Consumption

Cannabis is the illegal drugs consumed by the highest number of students aged 14 to 18, with quite a difference over others. 36.2% have tried it in their lifetime, 29.8% have used it in the last year and 20.1% in the last 30 days. Consumption is more prevalent in boys in all indicators, although this difference is not as pronounced as in other illegal substances. This difference does, however, increase with the intensity of consumption. The percentage of daily cannabis users is 3.2%, almost double in boys (4.2%) than in girls (2.2%).

Cannabis is also the illegal drug whose consumption occurs at a younger age. The average initiation age of consumption in secondary students is 14.6, being similar for both sexes and having shown no significant changes compared to previous years. The extent and frequency of cannabis use increases between the ages of 14 and 18, with the greatest increase taking place between 14 and 15. A third of students aged 18 have used cannabis in the last 30 days, and 11.9% have done so more than 10 days within that 30-day period.

These data take on more relevance if one takes into account that cannabis is often the substance that gives access to the use of other drugs such as cocaine or synthetic drugs, which are more addictive and have more harmful consequences for consumers. In the same vein, as can be observed, the age of first use of this substance is often higher than in the case of alcohol and tobacco, which probably warns us of the importance of the availability of consumer substances and the phenomenon of escalation in drug use. In the case of cannabis, the percentage increases takes place mainly at the age of 16 and it is from the age of 18 when a greater number of young habitual smokers can be found.

Consumption of synthetic drugs

The consumption of ecstasy and other derivatives of phenethylamines has spread especially since the nineties. According to the Spanish Observatory on Drugs (OED, 2000), one in twenty schoolchildren has experimented with cocaine or synthetic drugs. Comparing regular consumption of ecstasy (within the last thirty days) from 1998 to 2000, there was increase in the consumption rate, from 1.6% to 2.5%, among 14 to 18 year olds. This is the only psychoactive drug whose consumption has increased compared to amphetamines, cocaine and hallucinogens, which have seen declining use. The

three main reasons for using ecstasy were: fun (41.3%), feel new sensations (21.8%) and dancing (19.6%).

Calafat et al. (2000) find in their research into drug use in recreational life, that 37.5% of subjects had consumed ecstasy at some point. Ecstasy use in Spain is very similar to that in the rest of Europe. In our country there are less people who have never used it (65.6% in Europe and 60.8% in Spain), but there are more who have tried it and who have never used it (10% and 15%). Analyzing the use of ecstasy in terms of certain social variables such as age, occupation and socioeconomic status shows that ecstasy use increases with age, although young users consume more frequently. Take note that young people who work consume more, this being a feature common to the use of other drugs such as cannabis or cocaine. Adolescents and youths with higher socioeconomic status are those who consume in ways described as most frequent users (9.4%) and very frequent (3.8%), while those belonging to lower strata consume more sporadically (19.6%).

Average Age at Initiation of Substance Use

There is an increasing trend of earlier substance consumption: tobacco (16.4 years old), alcohol (16.7 years old) and among the substances of illegal trade, cannabis at 18.3 years old on average. Substances that are starting to be used earlier are tobacco, volatile substances (in this case by a minority) and alcohol, whose mean initiation age ranged from 13 to 14 years old. This is followed by tranquilizers and cannabis (14.2 and 14.6 years respectively). There are no significant variations in initiation age of consumption by sex. Nor are there significant variations in initiation age in the majority of drugs compared to previous years. Although in the case of tranquilizers, cocaine and volatile substances, consumption is beginning to occur a bit earlier, and in the case of heroine a bit later.

Gender Differences in the Consumption of Drugs

Except for psychotropic substances (tranquilizers or sedatives) the prevalence is generally higher among men than women. Differences are especially prominent in the last 30 days. For example, in cannabis use there are three men consumers for every one woman (12.5% in men and 4.7% in women), while for cocaine use for each woman consumer there are 2 men (2.5% in men and 0.7% in women). The same is true regarding legal drugs. Alcohol consumption in

the past 30 days was 76.0% in men and 52.9% in women, and the use of tobacco was 43.1% and 33.6% respectively.

In the case of illicit drugs, the differences by sex are more pronounced the more recent or intensive the consumption. In fact, the intersexual differences in the proportion of consumers within the last 30 days are greater than the proportion of consumers at some point in life. These differences have also been observed in previous surveys.

Mendoza, Sagrera y Batista (1994) analyzed consumption patterns in a national sample of adolescents. Among the most interesting findings of this study we note the following:

1) The percentage of adolescents who had consumed alcoholic beverage was 85%.

2) 96% of male users and 90% of women had tried an alcoholic drink before age 16.

3) There were a higher proportion of boys than girls initiated in consumption, although with increasing age, the differences in these tended to decrease.

4) 21% of the sample drank alcohol every week. The percentage rose to 51% among vocational students.

5) Only 18% of the sample reported not having consumed alcoholic drinks.

We conducted a study to determine the prevalence and consumption rates in a representative sample of more than a thousand high school students (Espada, Mendez and Hidalgo, 2000). We found that 67.7% of teens had tried alcohol. Of these, 37.8% could be considered heavy drinkers.

According to the recent report of the European Monitoring Center for Drugs State of the drugs problem in Europe, published in 2009 (the estimates presented in the report refer to the adult population aged 15 to 64 and are based on the latest data available in Europe):

– Lifetime prevalence of cannabis is at least 74 million (22% of adult Europeans). The consumption rate during the last year is about 22.5 million European adults (i.e., one third of lifetime consumers) and consumption during the last month is about 12 million Europeans.

- With regard to cocaine, lifetime prevalence is about 13 million (3.9% of adult Europeans). Use during the past year was four million European adults (i.e., one third of lifetime consumers). Recent use (last month) was about 1.5 million Europeans.

- Ecstasy use in Europe has a lifetime prevalence of 10 million (3.1% of adult Europeans), with consumption during the last year of 2.5 million (i.e. one third of lifetime prevalence) and consumption in the last month slightly less than one million.

- Amphetamine use occurs in about 12 million (3.5% of adult Europeans), consumption during the last year about two million (one sixth of consumers throughout life) and during the last month less than one million.

- Opiates have a consumption rate of between 1.2 and 1.5 million Europeans, and are the primary drug in 50% of all treatment requests.

Comparative epidemiological analysis between countries that are part of the European Union provides both an overview of the situation of consumption. The trend continues to be worrying, finding different patterns of consumption in European countries.

The annual report is available in 23 languages and can be downloaded from the website http://www.emcdda.europa.eu/publications/annual-report/2009.

UNIT 3: FROM USE TO DEPENDENCE. DIAGNOSIS

The differentiation between use and abuse continues to be a point of contention. The diagnostic classifications in the International Classification of Diseases and Health Problems (ICD-10) and Diagnostic and Statistical Manual for Mental Disorders (DSM-IV-TR) systems establish a set of operational criteria for classifying abuse and dependence. This unit deals with the different consumption patterns, according to their severity, and the criteria that indicate the existence of a problematic consumption of drugs or an addiction.

3.1. Consumption Patterns

A first differentiation to take into account is the distinction between drug use and drug abuse. Drug use or consumption is understood to mean consumption that does not adversely affect health. For example, there are no

adverse health effects that an adult accompany a meal with a glass of wine, if he/she does not have to drive later.

Abuse is defined as that consumption that harms the health consumer in the short or long term. Examples of abuse are drinking alcohol until intoxication, or consuming a dose of cocaine.

A drug of abuse is said to be so when we refer to a substance that has psychoactive effects, capable of being self-administered, and the consumers generally does not take for therapeutic purposes, but for recreational or experimental ones.

UNESCO differentiates various types of substance use: a) experimental use, which is characterized as by chance, covers a short period of time and that is basically a test of the substance and b) experimentation with the drug that can take place on several occasions. It is really considered experimental substance use when the person tries a drug and later completely stops using it.

The norm of occasional consumption entails an intermittent pattern of drug intake, which depends on the emergence of situations that trigger consumption. Within this form of consumption are two types of norm. The first is socio-recreational, characterized by taking place in the context of enhancing recreational or social relations, such as weekend consumption. The second norm is circumstantial-situational, which is related to the objective of improving performance at work, at school, etc.

Habitual consumption occurs daily. In this pattern of consumption dependence and withdrawal symptoms are usually present when the drug is not consumed. Therefore, the habitual consumer is motivated by the need to reduce physical and psychological discomfort. A desire exacerbated by consumption usually appears.

Finally, the norm of compulsive consumption is that which occurs at a frequency of several times a day. The consumption renders the person incapable of coping with everyday problems, seriously affecting her/his work, family and social relationships. The consumer´s whole world is focused on maintaining a minimum level of substance that will help alleviate the symptoms of withdrawal.

According to this distinction between use, abuse and dependence, we can speak of different kinds of consumers. Barriga (1996) distinguishes between four types:

a) Experimental: they live the consumption experience as a trial; driven by curiosity, they are mainly stimulated by the context in which they find themselves.

b) Occasional: they consume based on the surrounding circumstances. The drug is used as an element of celebration and as a means to achieve euphoria.

c) Habitual: they approach establishing a certain dependence on the drug. In their consumption, they can find refuge from difficulties or problems.

d) Dependent: compulsive consumers who if deprived of the drug would experience withdrawal syndrome.

3.2. Diagnostic Criteria

The Diagnostic and Statistical Manual for Mental Disorders (DSM-IV-TR) is one of the most widely used diagnostic systems in psychiatry and psychology. It establishes the criteria to delimitate drug abuse and diagnose substance dependence. DSM-IV-TR defines the problem as "a maladaptive pattern of substance use that involves a clinically significant deterioration or unrest", as manifested by three or more of the following symptoms at some point during a continuous twelve month period:

a) Tolerance, as defined by any of the following criteria: a need for markedly increasing amounts of the substance to achieve intoxication or the desired effect; or that the effect of the same quantities of the substance clearly decreases with continued use.

b) Withdrawal, defined by any of the following criteria: withdrawal syndrome characteristic for the substance appears, or that the same substance (or one closely related) is taken to relieve or avoid withdrawal symptoms.

c) The substance is frequently taken in larger amounts or over a longer period than initially intended.

d) There is a persistent urge or unsuccessful efforts to control or cease consumption of the substance.

e) A lot of time is spent on activities related to obtaining the substance (e.g., visiting multiple doctors or traveling long distances), consuming the substance (e.g., one dose after another) or recovering from the effects of the substance.

f) There is a significant reduction in social, occupational or recreational activities due to the consumption of the substance.

g) Substance intake is continued despite being conscious of persistent or recurrent physical or psychological problems which seem to be caused or exacerbated by the consumption of the substance (e.g., cocaine use despite knowing that it causes depression or continued alcohol intake despite it aggravating an ulcer).

The level and criteria for the severity of psychoactive substance dependence are as follow:

– *Mild*: Few, if any, symptoms in excess of those required to make the diagnosis, and the symptoms result in no more than mild impairment in occupational functioning or in usual social activities or relationships with others.

– *Moderate*: Symptoms or functional impairment between "mild" and "severe."

– *Severe*: Many symptoms in excess of those required to make the diagnosis, and the symptoms markedly interfere with occupational functioning or with usual social activities or relationships with others.

– *In Partial Remission*: During the past six months some use of the substance and some symptoms of dependence.

– *In Full Remission*: During the past six months either no use of substance, or use of the substance but no symptoms of dependence.

The International Classification of Diseases and Health Problems (ICD-10) defines the dependence syndrome as being a cluster of physiological, behavioral, and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviors that once had greater value. A central descriptive characteristic of the dependence syndrome is the desire (often overpowering) to take substances. A return to substance use after a period of abstinence leads to a more rapid

reappearance of other features of the syndrome than occurs with nondependent individuals.

According to the ICD-10, a definite diagnosis of dependence syndrome can be made only if at least three or more of the following have been present at some time during the previous year:

- A strong desire or sense of compulsion to take the substance.

- Difficulties in controlling substance-taking behavior in terms of its initiation and termination.

- A physiological withdrawal state when substance use has ceased or have been reduced, as evidenced by: the characteristic withdrawal syndrome for the substance; or use of the same (or closely related) substance with the intention of relieving or avoiding withdrawal symptoms

- Evidence of tolerance, such that increased doses of the psychoactive substance are required in order to achieve effects originally produced by lower doses.

- Progressive neglect of alternative pleasures or interests because of psychoactive substance use, increased amount of time necessary to obtain or take the substance or to recover from its effects.

- Persisting with substance use despite clear evidence of overtly harmful consequences.

UNIT 4: INDIVIDUAL AND SOCIAL FACTORS THAT MODULATE THE INITIATION AND MAINTENANCE OF DRUG CONSUMPTION

Although the study of risk factors is a wide and well established field, in this unit we present a synthesis, referring to the bibliography for a more in–depth look at the subject. We also explain the factors that modulate the initiation and maintenance of drug use according to the classification of individual, micro social and macro social factors. Family factors that would complete this classification are presented in Module 2 of the course.

4.1. Individual Factors

Biological Aspects

Among individual factors related to substance use, genetic variables stand out the most. Is addiction transmitted from parent to child? The relationship between parental drug use and the initiation into substance use by children has generated much controversy over whether the intergenerational transmission of drug abuse is due to biochemical or genetic factors or, in addition to biological vulnerability, other more determinant risk factors that are psychosocial or environmental in character. Most data come from studies focused on alcohol consumption and very few studies have been done in relation to other types of drugs.

Physiological/biochemical studies suggest that sensation seeking and low risk avoidance predict the early initiation of alcohol use and later development of addiction. Taking these conclusions into account, Zuckerman (1987) conducted a major study focusing on sensation seeking and suggested that it was biochemically linked to platelet-mono–amino oxidase (MAO) activity, which was also associated with the early onset of alcoholism. Similarly, in the case of marijuana, poor impulse control during childhood appears to predict the frequent use of this substance at the age of 18 (Shedler and Block, 1990).

Studies with families indicate that alcoholic subjects are usually more likely to have a previous history of alcoholism among parents or siblings. These kinds of studies present significant methodological difficulties that hamper the generalization of results and limit their conclusions. Nevertheless, from research with children of alcoholics it has been concluded that these children are a risk population.

Another area in which the contribution of genetic factors to the development of alcoholism has been investigated is the analysis of twins. In this area, there was an outstanding study conducted by Kaij (1960) with 174 pairs of Swedish male twins who had been reared separately from birth. The results indicated that when at least one member of each pair of twins was a proven chronic alcoholic, the concordance values for alcoholism were high, 71.4% for monozygotic and 32.3% in dizygotic twins.

Despite the discrepancies in the studies conducted in this area and the need for more evidence to confirm the assumptions, the idea that monozygotic twins may have a higher probability of being concordant for the development of alcoholism than dizygotic twins appears to hold up. This effect appears to be considerably higher for men than for women.

Adoption studies conducted in Denmark, Sweden and United States have amassed evidence for the genetic transmission of alcoholism in male subjects by indicating alcoholism rates from 18% to 27% for adopted children of alcoholics compared with 5% or 6% for subjects adopted from alcoholic biological parents (Bohman 1978, Cadoret and Gath, 1978; Cadoret, Cain and Grove, 1980).

Among biological factors, two interesting aspects stand out because of their implication in prevention programs in terms of the adjustment and enhancement of substance use protective factors in the adolescent population. The first is the differential influence of gender in young people in substance use and the second is age as a risk factor for substance use.

a) Sex

Most studies that have considered this factor have reached similar conclusions indicating that no significant gender differences exist in comparing groups of users and nonusers. These data underscore the idea that there appears to be no genetic vulnerability determined by the sex which leads subjects to use or to abstain from substance consumption.

b) Age

Most studies indicate that the onset of drug use usually occurs between the ages of 13 and 15. The early use of substances predicts the subsequent improper use of them. The earlier drug consumption starts, the greater the frequency of use thereof (Alvira 1984; Basabe and Páez, 1992; Brook, Lukoff and Whiterman 1980, Fleming, Kellam and Brown, 1982; Rachal et al., 1982) and the greater the likelihood of a persistent and extensive involvement in other more dangerous substances (Kandel, 1982, Sanchez and Berjano, 1995).

On the contrary, studies reveal that an older onset age of drug use correlates with a lesser involvement in said activity and a greater likelihood of discontinuity in their use.

Depression and Anxiety

The relationship between depressive symptoms and/or anxiety and drug use are not entirely clear. From studies examining the relationship between substance use and depressive symptomatology, the following conclusions are reached:

Substance use is usually preceded by some kind of emotional distress (Huba, Newcomb and Bentler, 1986, Kaplan 1985). A 5-year longitudinal study with adolescents found that a difficult temperament contributed in a determinant manner to the initiation and maintenance of drug use.

In addition, substance use is one of the methods used to alleviate emotional problems, although its effects are not effective in the long term because it fosters depressive symptoms.

Drug use is strongly related to mental health problems among youth who have other risk factors. Studies indicate that individuals who have more emotional problems and are socially isolated, consumed more alcohol, marijuana and other illegal drugs.

In the study of the relationship between internalizing disorders such as depression and drug use, research results point to a coexistence of both factors.

The summary of the studies is that there is a low level of personal satisfaction in drug users which might explain the high frequency of mood disorders and suicide among adolescent substance consumers.

In studying the relationship between anxiety disorders and drug intake, it has been found that social phobia, panic attacks, generalized anxiety, agoraphobia and separation anxiety constituted problems implicated in the intake of drugs. Young people diagnosed with social phobia describe substance consumption as an escape behavior in the face of their high degree of anxiety in interpersonal situations. On the contrary, pro-social, assertive and socially skilled adolescents are less inclined to exhibit behaviors risky to health, such as drug use.

Personality Traits

Characteristics such as poor control of emotions and social withdrawal appeared associated with the escalation in substance use. Recently, English et al. (2007) found in a sample of Spanish secondary students that the personality variables most related to the consumption of legal substances are extraversion and emotional instability. To a greater extent, extraversion and antisocial behavior were related to the consumption of legal drugs.

One of the characteristics of people with high levels of extraversion is the search for new sensations which, as noted by Alonso and Del Barrio (1996), constitutes a predisposing factor to substance use.

Sensation seeking

Sensation seeking is defined as the need for complex sensations and experiences, new and varied, and the desire to assume physical and social risks to satisfy them.

Zuckerman has been one of the authors who has most focused on studying sensation seeking, understood as a personality trait, and connecting it with risky behavior (Horovath and Zuckerman 1993, Zuckerman, 1979). Said behavior includes various behaviors related to substance use such as drinking and smoking, as they involve long-term risk (Zuckerman, 1980, 1987). Sensation seeking can be an important risk factor in relation to drug use/abuse among adolescents, in the same way that other types of variables of a contextual or familial nature are.

Antisocial Personality

It has been found that irritable, easily distracted children who have frequent tantrums and fights with their siblings and are involved in the development of pre-delinquent behaviors are more prone to drug use in adolescence than those who do not exhibit such behavior.

Aggressive behavior in children seems to be a sign of later antisocial behavior. In any case, early aggression is not invariably followed by serious antisocial behavior in adulthood. Data indicates that if the aggressive behavior continues until the beginning of adolescence, it can be considered a powerful predictor of alcoholism and aggressive behavior in the later teen years. In addition, drug abuse seems to be more likely if antisocial behavior persists and becomes more varied in early adolescence, including fights and bad behavior in school (Kandel, 1982; Sarnes y Welte, 1986).

Other characteristics such as hyperactivity and attention deficit disorders appear to increase the risk of delinquency when combined with behavioral problems, including aggression in all its forms.

As Espada and Méndez (2002) point out, the studies that evaluate the incidence of these behaviors in the Spanish youth population are still scarce. These authors indicate that there is a relationship between the consumption of

alcohol and illegal drugs such as cannabis and cocaine and antisocial behaviors, as adolescents who engaged in this type of conduct were more likely than not drug users.

4.2 Macrosocial Factors

Institutionalization and social approval of legal drugs

Alcohol consumption is a socially accepted, and sometimes extolled, behavior. Television, film and media show pictures of famous people and persons of social prestige drinking. Drinking is associated with success, social life and pleasure, such that the celebrations of numerous social events (e.g., banquets, birthday parties, business dinners, etc.) all have alcohol present.

Advertising

The budget allocated by government to prevent the abuse of alcohol cannot compete with the multimillion sums invested by national and multinational companies in advertising to promote the consumption of alcohol. The brands of alcoholic beverages are present in all types of media and advertising campaign mediums (billboards, mass media, sponsorship of sporting events, etc.). The beverage advertising messages connect their product with values and stimuli that are attractive incentives for youth, such as friendship, having a personality, the transition to adulthood, sex, etc.

Availability and Accessibility to Substances

The availability of a substance refers to, on one hand, its quantity for sell in a given market. On the other hand, if this is coupled with easy accessibility to it by potential consumers, the probability of using that drug increases. In this sense, the amount of product in the market, a sufficient number of points of sale and affordable price for consumers, greatly influences use (Becoña and Vázquez, 2001). In our country, because alcohol is a legal drug, it is widely available and easily accessible in many establishments where you can buy it at affordable prices and at extensive hours of sale. There is also poor control of the sale to minors. Other substances such as synthetic drugs are not sold in supermarkets but it is not too hard to find someone to distribute them in places of nightlife. The price of a dose (about EUR 14.40 for ecstasy) can be within reach of most adolescents and young adults.

Association between Drugs and Recreation

As previously noted, juvenile drug use is linked to free time on weekends, to certain supply places such as discotheques or pubs, and to the search for new sensations and experiences. Leisure time usage correlates with a greater or lesser risk of drug use, and is associated with attendance at supply sites and the search for the effects of drugs. Therefore, it is increasingly seen as more beneficial to encourage youth participation in associations (volunteering, NGOs, etc.) on one hand, and promote healthy recreational activities (sports, cultural events, etc.) on the other, which acts as protection factors, guarantees for the maintenance of healthy habits, and strategies for drug abuse prevention (Espada, Sarabia and Lillo, 1998; Macia, Olivares and Méndez, 1993).

4.3 Microsocial Factors

Family Unrest

Marital problems (e.g., quarrels, separation, divorce, etc.) can have a negative impact on upbringing models and parenting guidelines, facilitating the emergence of problems in adolescence, such as oppositional defiant behavior, antisocial behavior or drug abuse. Scant attention from parents to their children has been associated with higher rates of drug use, and especially the earlier onset of substance consumption (Chilcoat and Anthony, 1996; Griffin et al., 1999, 2000; Moos and Lynch, 2001; Steinberg, Fletcher, & Darling, 1994).

Inadequate parenting styles

Arbex, Porras, Carrón and Comas (1995) identify four styles of parenting which might be termed risky: a) confusion in reference models: ambiguity in family norms, lack of parenting skills, b) excessive security: the overprotection of the child creates a high dependency of the child on the parents, which will prevent the child from developing initiative, autonomy and accountability, c) lack of recognition: the absence of positive reinforcement by parents, and in general, an unconditional valoration of the adolescent favors a negative self-concept of himself/herself, consequently causing social and personal maladjustment, and d) rigid family structures: if a rigid family organization and/or hierarchical, adolescents tend either towards submission to or rebellion against that structure. Both options have a negative influence on the adolescent and may lead to a personality with low assertiveness, or a confrontation with the adult world.

Family communication

Communication is another factor that facilitates a harmonious upbringing for the child and adolescent. Suitable communication prevents isolation, educates for relationships outside the family and the expression of feelings, all of which facilitates a personal development without gaps. Shortfalls in personal development could lead to the seeking out of drugs to fill these gaps. Several authors (Elzo, Lidón y Urquijo, 1992, Macías, 2000a; Recio, 1992; Varó, 1991) emphasize the relationship between the negative experience of family relationships and greater use of drugs. Cohen, Richardson and La Bree, (1994) found that the less frequent was the communication between father and children and the time they spent together, the higher the rates of alcohol and tobacco use were.

Family alcohol consumption

Much of learned behaviors are acquired through observation and imitation of others, especially those with whom the young person identifies. Alcohol consumption in the household produces implicit learning, drinking is a pattern of daily life socially approved, and explicit, adolescents copy the behavior of their parents and older siblings. Studies show the significant relationship of alcohol use of parents and children (Méndez and Espada, 1999).

Pressure from the group of friends to consume alcohol and synthetic drugs

The group of friends is the reference framework that contributes to the reinforcement of the adolescent identity to the adult world and satisfies a sense of affiliation or belonging to a peer group with whom she/he shares a mode of talking, dressing, haircut, etc. Friends exert a powerful influence, including the group consumption of alcohol and other drugs, which acquires connotations of an initiation rite and constitutes a transgression of adult rules. The search for acceptance and fear of rejection by the group induce some youth into accepting the offers of these substances, although they inwardly disapprove of their use. Alcohol consumption and other drug use are learned. The risk that consumption will start increases if the adolescent is part of a substance-using group, in which the other members serve as role models and positive reinforcement of drinking behavior or the use of other drugs (Comas, 1992; Macià 2000b).

4.4 Personal Factors

Lack of information about alcohol and synthetic drugs

The lack of information about drugs (nature, extent of use among adolescents, short–and long-term effects, etc.) encourages curiosity and the desire to try these substances. Biased disinformation leads to erroneous beliefs. In the concrete case of alcohol note that a high proportion of adolescents do not consider it a drug (García-Jiménez, 1993).

Favorable attitude towards alcohol and synthetic drugs

Some features of adolescence, such as the tendency to underestimate risk behaviors, the search for new sensations, the desire for adventure, a taste for the forbidden, or the clash of generations, facilitate the development of favorable attitudes towards alcohol and synthetic drugs. The attitude of adolescents towards these substances is an important predictor of the initiation of consumption.

Deficits and adolescent problems

Deficits and problems are risk factors for adolescents, because they may try to compensate or relieve them by resorting to alcohol and other drugs. Thus, adolescents with better social skills have lower rates of drug use, depression, delinquency, aggression and other behavioral problems (Dalley et al., 1994; Griffin et al., 2000; Pentz, 1983; Scheier et al., 1999). In a study of primary students, Jackson et al., (1997) found that students with greater deficits in social competence (assessed by combining the self-report and assessment of the teacher) initiated drug use earlier.

Alonso and del Barrio (1996) found a strong relationship between self-esteem, locus of control and alcohol and tobacco consumption. Low self-esteem can have repercussions in the initiation of drug use for several reasons: because the adolescent seeks to alleviate the perception of low self-concept through drugs, to seek recognition in the group or to facilitate social contact through the consumption of alcohol and thus compensate difficulties in interpersonal relationships. Thus Betler (1987) found that higher levels of self-esteem were associated with lower consumption of cannabis in adolescence. Another study showed that higher levels of depression, anxiety and low self-esteem were positively related to favorable attitudes toward drugs and the likelihood of their use (Blau, Gillespie, Felner & Evans, 1988). In general, a high level of personal

well-being in adolescents acts as a protective factor against substance abuse (Griffin et al., 2001, 2002).

4.5. Integration of Consumption Risk Factors

Given the large number of variables that contribute to drug use, it is most appropriate to use a multi etiological model. In Figure 1, we present a model that joins together the main factors contributing to drug use in adolescence, with the variables grouped into three categories: a) historical context, including demographic factors (gender, age, social class) and biological (temperament) and environmental influences (drug availability, social conflict), b) social factors, which include school factors (such as the school environment) and families (educational guidelines, discipline, substance abuse by parents), the influence of peers (consumer and pro-drug attitudes of friends) and the influences of the media (television, movies, commercials), and c) personal factors, including cognitive expectations (attitudes, beliefs and expectations policy on consumption), personal skills (decision making, self-control), social skills (communication skills, assertiveness) and a set of relevant psychological factors such as self-efficacy, self-esteem or psychological well-being of the individual.

In this framework, social and personal factors are considered to act together to facilitate the initiation and escalation of drug use. Thus, some adolescents may be influenced towards consumption by the media, which sometimes normalize or glamorize drug use, while others may be more influenced by family or friends who use or have favorable attitudes and beliefs about substance consumption. These social influences are likely to have a greater impact on young people with poor social and personal skills or those with greater psychological vulnerability, such as low self-esteem, social anxiety and psychosocial stress. The more risk factors an adolescent has, the more likely she/he will consume drugs. Fortunately, knowing how these variables lead to consumption is very useful when conceptualizing and designing prevention programs. For example, a preventive program that improves social skills and personal competence may have beneficial effects on several psychological factors (e.g., increasing the well-being or self-esteem) and behavioral (such as the ability to turn down an offer), both of which are associated with reducing substance consumption.

Figure 1. Integrated model of drug use behavior (adapted from Espada, Méndez, Griffin & Botvin, 2002).
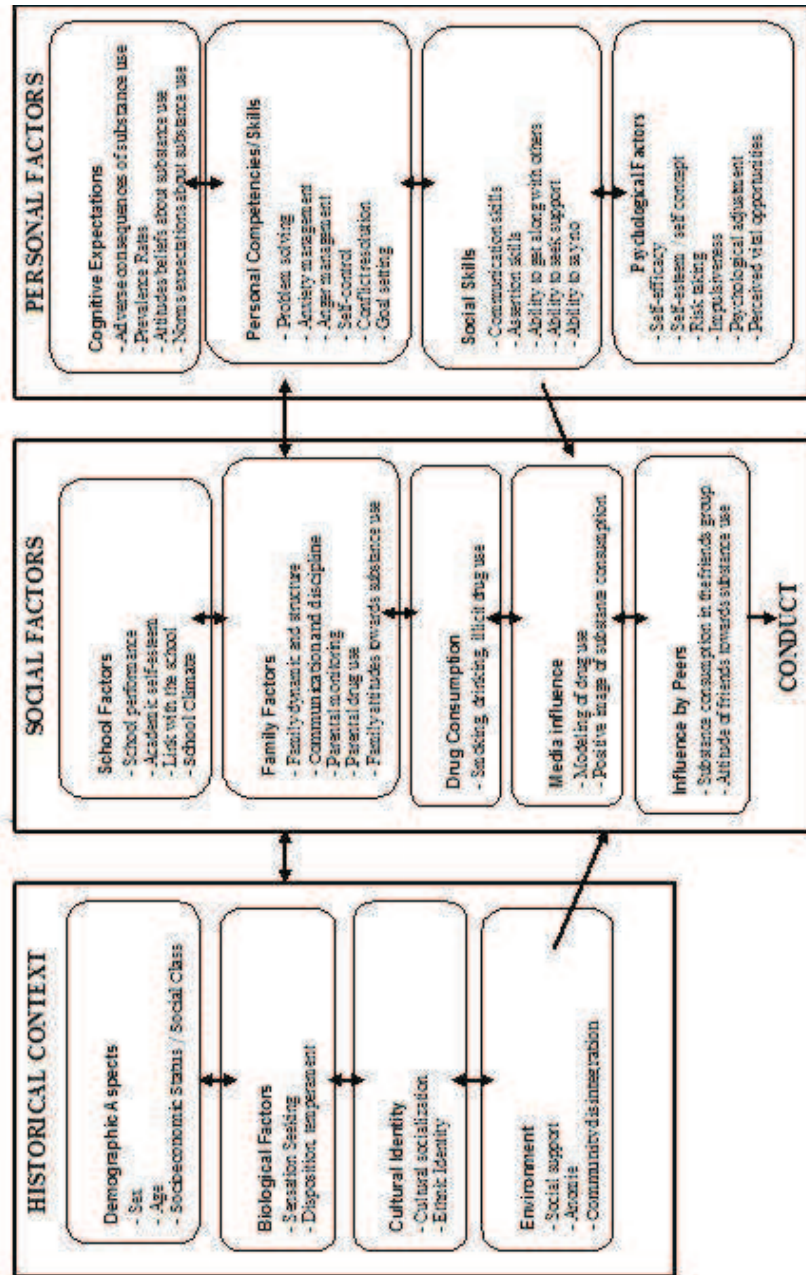
SELF-ASSESSMENT EXERCISES

1. Answer the following questions about Unit 1.

1. Alcohol is a stimulant drug.

2. Dependency is the set of physiological manifestations, behavioral and cognitive in which the use of a drug is a priority for the subject.

3. Nicotine is a substance found only in tobacco.

4. Drugs affect the Central Nervous System by stimulating, depressing or perturbing it.

5. Illegal drugs are more dangerous than legal drugs.

6. Withdrawal Syndrome appears only after prolonged drug use.

7. Among the Central Nervous System perturber drugs are cannabis and synthetic drugs.

8. Among the long-term negative consequences of tobacco consumption is lung cancer.

9. The routes of administration of a substance influence its effects on the body.

10. Cocaine is a stimulant drug.

Solutions:

1: F, 2: T, 3: F, 4: T, 5: F, 6: F, 7: T, 8: T, 9: T, 10: T

2. Unit 2 has presented a summary of the prevalence of drug use in Europe. See the European Monitoring Center for Drugs and Drug Addiction annual report at the following direction:

http://www.emcdda.europa.eu/publications/annual–report/2009

See what the status of your country is and write a short paragraph summarizing the most salient aspects: most consumed drugs, trend, age at onset and comparison with other countries.

3. Answer the following questions about Unit 3.

1. The difference between the use and abuse of a substance depends solely on the amount of dose.

2. The most commonly used criteria to diagnose substance dependence are the DSM-IV and ICD-10.

3. The occasional use of a drug is an intermittent pattern in intake, which depends on the emergence of situations that trigger the use.

4. A criterion for the diagnosis of substance abuse is that the drug is frequently taken in large amounts or over a period longer than initially intended.

5. According to ICD 10, Dependence Syndrome exists when at least three or more criteria during the last twelve months are met.

Solutions:

1: F, 2: T, 3: T, 4: T, 5: T

4. Answer the following questions about Unit 4.

1. A risk factor alone can explain the onset of drug use.

2. A high level of need for sensation seeking is a risk factor for consumption.

3. Advertising pressure is considered a macro-type risk factor.

4. Drug laws may affect consumers, but do not affect the onset of substance use.

5. Studies indicate that individuals who have more emotional problems and are socially isolated consume more alcohol, marijuana and other illegal drugs.

Solutions:

1: F, 2: T, 3: T, 4: F, 5: T

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MODULE II:

Family Context and Substance Consumption during Adolescence

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Module II:
Family Context and Substance Consumption during Adolescence

Unit 1. The adolescent's family.

Unit 2. Family and Peers: Two contexts that interact.
2.1. Family substance consumption.
2.2. Parenting styles.
2.3. The influence of adolescent behaviour on the family: The System.

Unit 3. From use to dependence. Diagnosis.
3.1. Debunking certain myths about the influence of peers on substance consumption.

Unit 4. Drug dependency prevention programs in schools

FAMILY CONTEXT AND SUBSTANCE CONSUMPTION DURING
ADOLESCENCE

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SUMMARY

Families of adolescents who consume substances share similar characteristics with any other family in which the children reach adolescence. Adolescents acquire new cognitive capacities which lead them to question their parents and the family´s norms and values. In addition, while not legally adult, the adolescent takes on the appearance of one; thus, parents must negotiate which adult roles they will permit their children to exercise and to what degree they will allow them to do so. During this process, it is not uncommon for conflicts and disputes within the family to arise. These conflicts and disputes decrease as the child transits through adolescence and new family roles are negotiated. Regardless, the family continues to be a strong emotional anchor point for adolescents, who trust their parents more than their friends or any other person when they are in real distress or need to decide on matters of profound importance.

One of the most studied risk and protective factors in relation to substance use is the family context. In this sense, research shows that adolescents who grow up in families that are models of substance use (i.e., consumers of some types of drugs such as tobacco, alcohol, cannabis or other) are more prone to consumption. Within family dynamics, it has been shown that families that act as a protection factor against substance consumption are those in which openly expressed affection, communication and a positive family atmosphere combine with the promotion of autonomy, requirements of maturity and the existence of clear and explained rules of conduct. These families have created a family atmosphere in which it is normal for the children to share their problems, concerns and extra-familial activities with their parents.

Nevertheless, we cannot consider family relationships to be merely cause and effect; parents do not exercise a direct and unilateral influence on their children. The family is a dynamic system and as such it grows and changes as its members grow and change. Thus, the conduct of substance consumption by

one of its members (be it occasional use or addiction) will affect the entire system and we must seek to act on said system if we want the behavior to disappear or decrease.

Boys and girls choose friends who share their interests, ideas, feelings or ways of seeing life. Should they find friends who do not share those issues they consider relevant, they will leave that group for one in which they feel more comfortable. As the first and principal development context, in the family boys and girls learn values, social skills or lifestyles. Accordingly, a substantial continuity has been found to exist between the family context and that of peers. Those boys and girls who have displayed healthy lifestyle habits within their families will seek out similar friends; the same occurs in contrary cases.

Once a group of friends has formed, they socialize with each other and increasingly resemble each other in terms of dress habits, behavior and even thoughts. It is more frequent that this socialization is for conduct viewed as positive by the adult world than for conduct considered negative or unhealthy. Nonetheless, if adolescents enter a deviant group (frequently because in their family they have not acquired positive values) they are socialized into increasingly problematic behavior, including substance consumption. To analyze the influence of friends on substance consumption, it is important to bear in mind the different levels of analysis: the cohort, the crowd, the clique and the best friend.

There are a multitude of drug prevention programs launched from the school context whose target population is the family of adolescent students. Before putting a program into practice it is important to establish fluid communication channels between parents and the school; therefore, everything possible should be done to get parents to come to the center to set this communication in motion. In this way, the school and family context are mutually involved in educating the adolescent.

Drug dependency prevention programs often have similar characteristics which include information about drugs, drug use prevalence, and phases prior to addiction, as well as risk and protective factors for families, individuals, and groups. These programs have diverse activities that can be carried out with parent groups. On other occasions, it may be advisable to not conduct sessions directly related to substance consumption, but rather to adolescence and family relationships during adolescence. This will serve equally to collaborate with

parents in the job of parenting and, of course, to educate them about the responsible consumption of substances.

INTRODUCTION

The onset of adolescence involves changes in the dynamics of all families, and the possible consumption of substances is yet another of the children´s behavior that must be dealt with. Families of adolescents who consume substances share similar characteristics with any other family in which the children reach adolescence. In fact, as noted in international reports, experimental and recreational substance consumption is common to most Western adolescent boys and girls (see Figure 1), making this an issue that inserts itself into the dynamics of a sizable number of these families.
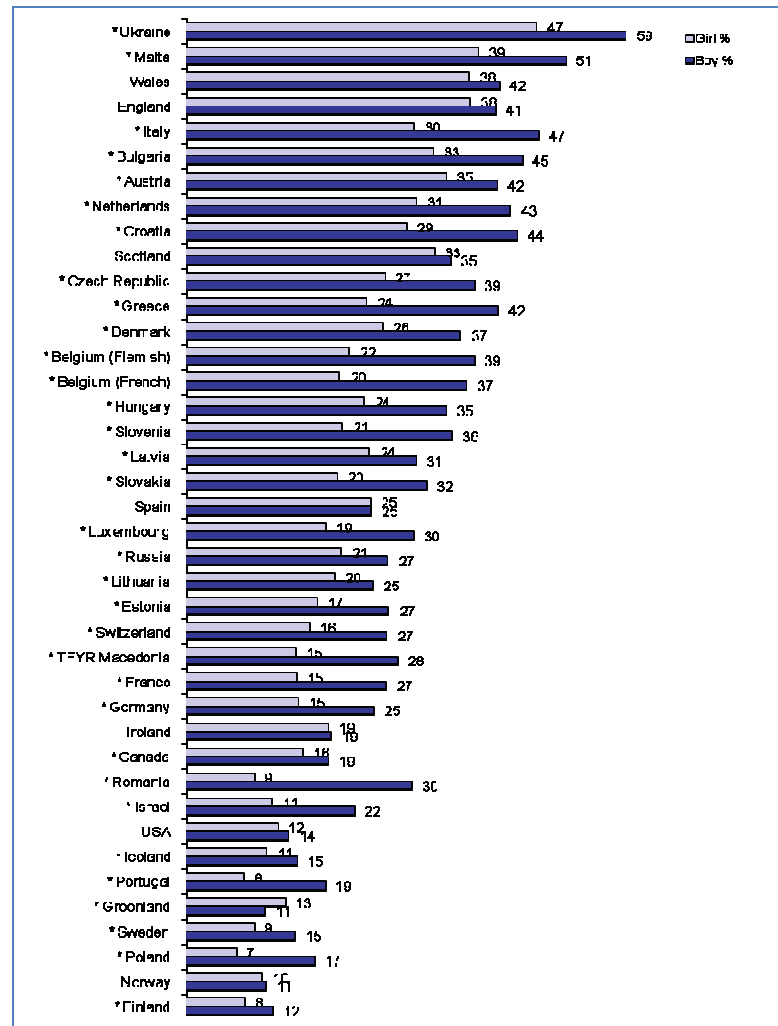
Figure 1. 15 years old boys and girls who drink alcohol at least once a week (Currie *et al.*, 2008; pg 125)

The fact of normativity of the recreational use of legal substances (alcohol and tobacco) and cannabis during adolescence in Western societies should not mean that it is considered appropriate. For this reason, research has continued on what causes some boys and girls to consume different types of substances while others do not. Likewise, there has been ongoing research on the characteristics of adolescents who are more or less moderate consumers and those who begin in adolescence with the consumption of substances that are

legal for adults, and bit by bit begin to use and abuse other substances, starting with cannabis (gateway to other drugs) and continuing onto other substances (e.g. cocaine, pills, etc). In this search for causative factors for substance consumption, familial aspects have acquired particular relevance. In the following pages we explore some normative processes that occur when children reach adolescence, later we focus a bit more on those familial factors that predispose to substance use, highlighting some myths that could be erroneously considered influential in the consumption of substances.

UNIT 1: THE ADOLESCENT´S FAMILY: NORMATIVE ASPECTS

The family is a fundamental context in people´s development and this does not change in the adolescent stage. To the contrary, it is an essential environment to overcome developmental tasks characteristic of adolescence such as identity formation, autonomy acquisition or adolescent psychosocial adjustment (Lila, Van Aken, Musitu and Buelga, 2006). Nevertheless, there remains in society the idea of the troubled adolescent who breaks with all family norms. This idea was probably promoted by some psychological theories, according to which it is necessary for adolescents to break and distance themselves from family ties so as to achieve adult identity formation, while turning to another more egalitarian type of relationship with friends, which lets them create new affectional bonds (Bloss, 1979). From this idea of conflictive family relationships and estrangement during adolescence that was promoted from the psychoanalytic viewpoint, we passed to the contrary version. And for a time during the twentieth century some psychologists insisted that adolescence was just another stage that did not involve conflict, estrangement, or particular changes in the family. At present, data collected in recent research show a less dramatic picture than the myth of the troubled adolescent, which unfortunately still prevails in society, and one less bucolic than those texts that struggled to convince us that the changes that occur during adolescence did not involve any family readjustments.

When boys and girls reach adolescence they are experiencing major cognitive advancements which leads them to have greater capacity for abstraction, realize that the reality they know is only one of the possible realities, use language and the capacity of abstraction to know that there may be other ways of relating and doing things which are different from those they know. These new capabilities will allow the being idealistic, being critical and being introspective typical of adolescence. Cognitive advances that occur with the arrival of adolescence enable adolescents to question the family norms that

they previously abided by, and even refute them with arguments, with consequent uncertainty of their fathers and mothers who will not always know how to react. Likewise, cognitive advances will enable adolescents to de-idealize their fathers and mothers, people as children they considered omnipotent and wise now become individuals with their own desires, needs and even failures, which undoubtedly, contributes to the questioning of authority and adult knowledge. In the case of substance use, the picture does not change: the adolescent can question family norms about the use and misuse of alcohol, tobacco, marijuana and other substances, and even question the rule that applies to the adolescent, but not their adult parents.

With adolescence important physical changes also occur, not only in external appearance, ever closer to that of an adult, but also internally with hormonal readjustments. The external physical changes that occur in adolescents will mean an insistence on more mature behavior on their part in some areas or from some social sectors, and they themselves will want to feel more mature, closer to the adult world, in which the regular and recreational consumption of substances is normative. And yet, despite physical appearance, they are still legally children. Adolescents are not legally responsible for themselves, although physically they are.

The rest of the family members are also undergoing changes that can add to the child´s transition to adolescence. Thus, it is no wonder that the puberty and adolescence of the children coincides with −and even that the arrival of adulthood in sons and daughters triggers- a moment of reflection and evaluation by parents on whether the life they are living is really the one they wanted or had envisioned when they themselves were young, what has been termed mid-life crisis.

In this context, it is not surprising that adolescence, especially during the early stages, is a good breeding ground for family conflict to arise. As it involves children who demand autonomy, question norms, have an outward appearance that reminds parents that time is passing, experience mood changes and parents who resist these changes; parents who society helps in this resistance, as they continue to exercise legal custody of their children. However, a thorough analysis and taking into account more dimensions shows us that, despite these conflicts which actually do occur, adolescents continue to consider their families as central to their lives. Particularly in the Spanish context, the family is the most valued institution for boys and girls between 15 and 24 years old (González-Blasco, 2006), and despite the problems adolescents consider

themselves loved at home. In fact, in most European countries, adolescent children find it easy or very easy to talk with their mothers (Currie et al., 2008). For this reason, working in the family and with the family becomes central to any prevention program or action on substance use.

As we have said, family conflicts and disputes frequently increase with the arrival of adolescence. These conflicts do not occur over just any topic, but rather the most frequent arguments in the families of adolescents relate to aspects of everyday life, those which adolescents consider their personal sphere, although they are still under the guardianship of their parents, such as curfew, clothing or household chores (Noller, 1994, Parra and Oliva, 2007). However, when making decisions about the future such as what to study, or in the case of political discussions, girls and boys seek out the opinions of those elders with whom they tend to agree and follow their suggestions. The subject of substance consumption is seen by the adult world as a matter of vital importance, however, not infrequently, boys and girls consider it as their personal sphere. It is the kind of conduct that begins in entertainment venues far away from the world of family, without adult supervision, and accessed with the new freedoms acquired by the adolescent, who leaves the neighborhood or school and starts to frequent alternative venues. Research also shows that there are issues that generate big arguments in the families of adolescents. Chief among which are sexual incursions, or precisely, substance use. For this reason, many adolescents avoid talking to their parents about these subjects, so as to avoid direct conflict. However, the families where these issues are matters for discussion, but where that discussion takes place in an environment of affection and warmth, are the ones which develop the most adjusted adolescents. We will take up this issue again a little further ahead.

Before delving into and focusing with greater detail on the relationships that have been found between substance consumption and family functioning we want to emphasize that arguments over general issues, fortunately, seem to tend to gradually decrease as adolescence elapses (Laursen, Coy & Collins, 1998) as parents and children find a new equilibrium more egalitarian and less hierarchical than the one that the family system had functioned with before the arrival of the children´s adolescence and that what stands out at the normative level in the family is continuity: those families that best adjust to the adolescent transition of their children, are those that previously maintained better relations with them. Despite the decrease in explicit displays of affection and the appearance of some conflict in early adolescence, only 5% of children who

during childhood maintain positive relationships with their parents become conflictive adolescents (Steinberg, 2001), so families who want to promote an adolescence of good relations with their children should begin by establishing a climate of trust and affection during childhood.

PRACTICAL ADVICE FOR THE FAMILY

Families that want to have the trust of their adolescent sons and daughters such that they trust the parents enough to tell them their fears and concerns, should NOT wait until adolescence and until they are older to establish said trust. They should start from childhood. During adolescence, children continue to trust their parents, but it becomes very difficult to begin to trust.

It is necessary to adjust the family's relational style with the children´s arrival to adolescence (remember, the adolescent acquires the cognitive abilities, physical appearance and interest of adults, but is still legally a child):

Make limits more flexible.

Talk, with arguments and both parties listening, about the "deep" issues: values, religious beliefs, the future, etc.

Review of family rules and norms.

New division of roles.

Continue to show explicit affection to the adolescent.

Show implicit affection (listen with respect, argue earnestly and do not impose, do not ridicule their fears or concerns, etc.).

UNIT 2: FAMILY DYNAMICS AND SUBSTANCE USE

As we have mentioned, the family is one of the principal contexts of the development of adolescents and where they have learned skills and abilities, certain morals, religious beliefs, attitudes toward life, and of course, more or less healthy living habits.

2.1 Family Substance Use

Within the various psychosocial factors that have been discussed in the literature on family influence on the substance use of adolescent sons and daughters the substance consumption by parents themselves stands out. In effect, the boys and girls who grew up in an environment where substance use is habitual and allowed seem to have a higher predisposition to substance use themselves. This is so for different reasons. On the one hand, the adolescent, by definition, has an adult body but is not considered as such by society. That is,

adolescence is defined as a stage that society creates so that boys and girls learn to be adults. In this learning, their primary models are the adults with whom they live (i.e., their parents and older siblings). Although the intuitive picture of a family in which there is substance use is that of constant disputes, neglect and lack of affection. This is not necessarily so, because there are various degrees of substance consumption. In a family where both father and mother are alcoholics, indeed, the problems will multiply; as any addiction affects working and personal relationships as well as those of any other nature. However, a family where the parents have a few beers with friends on a daily basis and, occasionally, "have one too many" and come home drunk, can work affectively with complete normality. In fact, there is evidence that substance use of parents and older siblings have more influence on the adolescent if the relationships within the family are loving and close (Andrews, 1994), at least when analyzing substance consumption that does not become pathological.

Moreover, regular substance use within the home leads to adolescent perceptions of normality, in these cases, a perception shared by the whole family. Substance use is not considered harmful to health at a practical level in the daily routine of the family. For example, it has been found that Spanish families do not believe alcohol consumption is problematic when the drinkers are adults, although they are more reluctant about alcohol use by minors. In any case, weekend alcohol consumption is not considered to be so negative, as there is a belief that it will not affect adolescents in the future (Fernández and Secades, 2003). Although this perception is partly true, since most adolescent boys and girls experiment with different substances, especially alcohol and tobacco, and become healthy and adjusted adults (Maggs and Hurrelmann, 1998; Oliva, Parra and Sánchez-Queija, 2008); however, the fact remains that those who are maladjusted due to alcohol consumption began to consume during adolescence.

2.2 Parenting Style

If we go deeper into family functioning, there are many variables that have been studied and related to substance use. Among these, perhaps, *family parenting style* stands out. It is principally made up of two dimensions: affection and communication on the one hand, and control and discipline on the other. The combination of both variables generates four parenting or child rearing styles: Authoritarian, authoritative, permissive and neglectful (see Figure 2).

	High Control	Low Control
High Affection	AUTHORITATIVE	INDULGENT

Low Affection	AUTHORITARIAN	NEGLECTFUL

Figure 2. Parenting Styles (Baumried 1968, Maccoby & Martin, 1983)

The studies that have analyzed traditional parenting styles find that families that deploy an authoritative parenting style in which affection and communication are high (i.e., explicit displays of affection, parents talk frequently to their children and arguments are often resolved through dialogue, while at the same time exercise their role as responsible adults and demand autonomy and maturity in the child, set rules that are explained, but that must be followed) have more well-adjusted children in general (Steinberg, Lamborn, Dornbusch & Darling, 1992) and, regarding what concerns us on this issue, who consume substances more moderately and responsibly (Fletcher & Jefferies, 1999). However, in authoritarian parenting style families, in which punishment-avoidance rules, without being explained, are imposed, the parent-child relationship is based on authority of the first opposite obedience of the second, and where explicit displays of affection may even be considered a weakness, or simply not deemed necessary, will have adolescents more prone to substance use than those of authoritative parenting style families. These children have not internalized the rules and their meaning, rather they simply abide by them to avoid punishment, which is why they "let loose" and engage in all those behaviors that have been prohibited when the authority figure is not present. The difference between the authoritarian and authoritative parent lies in the communication and affection they give to their children. In the authoritarian parenting style the parents' needs take precedence over those of the children, while just the opposite occurs in the authoritative parenting style, where the child's needs prevail over those of the parents.

Both the authoritarian and the authoritative profile share the fact that they place limits on their children, demanding autonomy and rule following. For this reason, they are the two parenting styles that give rise to the best adjusted children to adult norms, and consequently the boys and girls who consume the least substances. Parenting styles characterized by the absence of these requirements are called permissive, distinguishing between indulgent (parents who do not require compliance with standards for their children while at the same time are affectionate with them) and neglectful, which is the parenting style characterized as much by the absence of rules and limits as by the absence of explicit affection, love, or complicity in the parent-child relationship.

Children of permissive styles are those more prone to substance use. They have grown up without clear rules, and without adults to guide and set limits for them in their quest for autonomy. In this respect, while children of indulgent families at least have a strong sense of self-confidence, the children of neglectful families are those who score lowest on psychosocial competence, while at the same time, have the greatest behavioral problems, including substance use (Lamborn, Mounts, Steinberg, Dornbusch, 1991; Steinberg, Blatt-Eisenga, 2006). Boys and girls who grow up in families with negligent parenting styles have not received the attention and affection of their parents, so they have not formed an idea of themselves as people worthy of love, have not learned basic social skills in the family context, neither have they received the necessary autonomy stimulation or behavioral control characteristic of relationships between parents and children. These children are those who have a worse adjustment in general.

Despite the importance granted to the dimension of control in these paragraphs, many authors highlight the influence of the affective dimension. In this sense, sons and daughters from loving families that show the affection they feel toward their children daily will be more sensitive to their parents' parenting practices. That is, the rules are internalized and complied with better when explained in a climate of mutual empathy and caring where parents show genuine interest in their children than when they are imposed by fear of punishment (Kerr and Statin, 2000); the affection being the mechanism or the catalyst that makes the control function. In recent years, there has also been an analysis of an improvement in the role of monitoring or control in the emotional and behavioral adjustment of adolescents. Normally, it was thought that if parents knew what their children were doing when away from home it was because they cared to know, inquiring and asking their children about their activities outside the home, or imposing strict limits and delimiting what activities can or cannot be done. However, Kerr and Statin showed that this knowledge could come by way of a third source: Self-disclosure, being the adolescents themselves who approached their parents about their affairs, concerns, or activities outside the home. The boys and girls who utilize self-disclosure to approach their parents are precisely those who show better overall adjustment and less substance use in particular. Likewise, they show in their research that the knowledge parents have about their children´s activities is more in tune with reality when they get it through self-disclosure than when they impose such activities or obtain information through interrogation (Kerr & Stattin, 2000; Statt). Finally, research by Kerr and Stattin speaks to the

importance of the family´s affective climate for the proper functioning of the adolescent boy or girl, since it is this climate that triggers self-disclosure.

PRACTICAL ADVICE FOR THE FAMILY

a) The family serves as a model for its adolescent children. It is important to show a model of responsible substance consumption.

b) The climate of affection, respect, mutual trust, support and of family warmth will facilitate the adolescent´s self-disclosure, and along with it, the control, supervision or monitorization necessary on the part of parents; thus facilitating behavioral and emotional adjustment, and non consumption or moderate intake behaviors by boys and girls.

c) The absence of monitorization of the conduct of children is the variable that exerts the most influence on subsequent substance use in adolescents. If this absence of supervision combines with lack of affection, it is explosive and contributes to adolescent maladjustment.

2.3. Influence of adolescent behavior on the family: the system

In Western cultures, the importance of parental behavior in accordance with the Authoritative Parenting model has been proven. Authoritative Parenting promotes the best academic achievement, best sense of self-confidence, internal attributions (i.e., adolescents should know that their actions cause consequences and these are not derived from chance) and low substance use. In spite of this, the fact remains that the behavior of boys and girls also influences the way their parents act. Certain boys and girls favor the authoritative educational style better than others. In this sense, an adolescent who tells her affairs to her parents, abides by family rules, gets good grades, etc. will facilitate her parents using an authoritative style; while a girl who uses substances, hides her activities from her parents and gets low grades will provoke a tighter parental control of her behavior. They will ask directly without waiting for her to tell them herself, try to set clearer limits, seek information from external sources and facilitate the deterioration of the emotional climate of the parent–child relationship, ultimately leading to more authoritarian parenting practices.
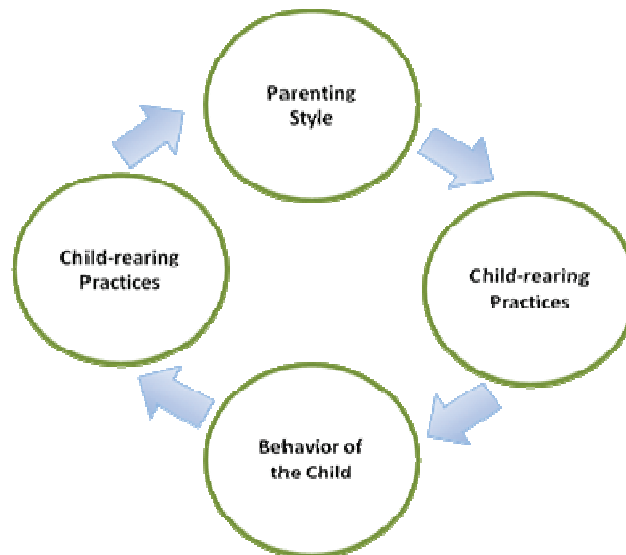
Figure 3. Relationship between child behavior and parental style

As we see, relations are not so simple nor do they imply a cause–effect relationship, since the family is a complex dynamic system, which is influenced by multiple environmental factors that change according to the age of the members who compose it and circumstances that occur to each.

In this sense, systemic theories conceptualize the family as a system in which the conduct of one member affects the entire system and the family system will affect, in turn, the behavior of each family member. In the present case, we have explained in the previous section how the behavior of parents and even older siblings can affect the adolescent (both parental substance use and parental practices), and how the behavior of children can cause the parenting style of their parents to change. However, systemic theory goes beyond momentary and particular influences of parents and children. Systemic theory considers that all behavior, adapted or inadapted, by people influences while at the same time being influenced by systems of which they form part, and especially the family system. Thus, in the case of dysfunctional families, where substance use constitutes only part of the family's problems and coexists with other general ones, the only way to intervene is through family therapy with all members of the family (or as many as possible) going to the intervention. In some cases, the family is apparently functional, having an Identified Patient (identify patient-IP) who seems to be the only problem.

Let´s consider an example: suppose that the IP is an adolescent who begins to consume abusively. The adolescent´s abusive substance use will affect the family system, affecting relations between siblings (between the adolescent and his siblings, and also the siblings among each other), the parents' relationship, relations between the IP and his parents, and generally the system as a whole. It is not difficult to imagine one parent defending the child's behavior, considering it to be no big deal and only temporary, while the other attempts to control the behavior of the child, feuding constantly with him or going through the IP´s things to find substances. Nor is it hard to imagine in our example that this diversity of views would cause disputes between the couple, who would blame each other for the lack of discipline or excess of control. Without expanding any further, this theory understands that the problem of adolescent substance use is not only that of the adolescent, but rather all family members. So, it is important that intervention to reduce substance use be done on the whole family, seeking to break patterns of dysfunctional interactions. For this, it is not necessary that the whole family go to the consultation (especially because in some cases a member does not want to go), but that the intervention be directed to the complete system: educating in new parenting models, breaking circles of dysfunctional behavior, involving the whole system in solving the problem, etc.

Although these theories are used more in clinic environments than in educational ones, we draw from them some lessons that are still fundamental and practical, emphasizing the need to involve the family in the problems of its individual members. Some studies have shown family therapy to be more effective in adolescent substance use problems than individual and even peer group therapy (Stanton and Shadish, 1997).

PRACTICAL ADVICE FOR THE FAMILY

The family is a system of complex relationships and the relationship cannot be simplified to considering it one in which parents exercise influence over the children. Children and their behavior will also change family dynamics.

Although only the student who seems to have problems with substance use is registered at the school, it is important that we try that our intervention be addressed to the entire family system and not just the adolescent

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UNIT 3: FAMILY AND PEERS: TWO CONTEXTS THAT INTERACT

As we said in section one, adolescents choose their parents or other significant adults as confidants for certain personal issues and concerns and friends or peers for others. In this way, research shows that, despite the fear that

adults have about the influence that friends may have over the adolescent, it is one's parents or other significant adults to whom boys and girls turn for opinions or advice when it comes to matters of great relevance. Nevertheless, not all adolescents have parents they can turn to who are concerned and responsive or employ democratic parenting practices. Some boys and girls grow up in environments with parents who are neglectful or simply unavailable for their children. . It is in this environment where the children often turn to peers for the advice and support they are not getting at home and precisely in these cases where it is more likely that the group they turn to is a deviant one. This group will exert negative influence on the adolescent on various levels which would be interesting to analyze (Miller, Alberts, Hecht et al., 2001):

Cohort. Defined by groups that have approximately the same age. This large group can affect the idea of what is appropriate in the reference age. Studies indicate that the perception of what is appropriate in the cohort correlated with the adolescent´s drug use much more than the acceptance of consumption on the part of parents or siblings. In addition, adolescents tend to systematically overestimate the degree of drug use and the acceptance of said use by their reference cohort. At present, the consumption of alcohol on weekends, tobacco and even marijuana is accepted by an entire cohort of adolescents, which leads to these behaviors being considered normative and even harmless.

Reference group, crowd. It is a group based on reputation, with certain stereotypes with which individuals identify (e.g., clowns, nerds or athletes). Research shows that students who identify with delinquent groups tend to show higher levels of consumption of alcohol and other drugs. The groups called druggies, losers or rejects engage in greater consumption of alcohol, other drugs and have significantly higher levels of delinquent behavior. Conversely, groups of athletes or intelligent students tend to reject substance consumption as a common element of leisure.

Small group of friends or clique. They are small, cohesive groups (five to ten members) of boys and/or girls who share attitudes, thoughts, and sometimes drug use. Members of these groups often have the same age and socioeconomic status. Within these groups, drug consumption can play an important role in group identification. This group tends to develop a consensus on where, when and what type of drugs can be consumed. Within this group, pressure to conform to group norms is exercised by offering desirable rewards such as the position of status within the group and applying undesirable sanctions such as exclusion based on the acceptance of group norms. In the case of substance

consumers said norms involve consumption. Similarly, a click in which sports, religious or artistic values predominate will base group member status on matters unrelated to substance consumption.

Best-friend dyad or best friends. The best friend (both same sex as well as opposite) is the major source of influence, even if you control for substance consumption of other friends and peers. Alcohol consumption by the best friend is the best predictor of alcohol consumption for both boys and girls. However, this last point is up in the air, since not all authors agree with this aspect.

3.1. Debunking Certain Myths about the Influence of Peers on Substance Consumption

Some years ago articles by Cohen (1977) and Kandel (1978) articulated how the three following concepts relate: behavioral homophily, active selection and reciprocal socialization. The term behavioral homophily refers to the trend towards similarity in various attributes among people affiliated with each other (friends, clique, crowd). The fact that boys and girls who are part of the same groups have similar habits (behavioral homophily) has traditionally been considered evidence that adolescence is a period of conformism. Even today there are studies that speak of conformity when similarities in the behavior of a group of adolescents are observed. However, a longitudinal study by Kandel (1978) showed two differentiated processes that cause the similarities that we have been describing to occur. On the one hand is active selection. That is, when choosing friends, people gravitate towards those who most resemble them. In general, they select friends who share social characteristics congruent with their own identity; those with whom they best fit. On the other hand is reciprocal socialization. Once a friendship is formed by those who from the beginning have characteristics in common, they mutually socialize or reciprocally influence each other through the relationship, such that with the passage of time, they grow increasingly similar. The explanations about the influence of the group are normally circular and therefore irrefutable. That is, similitude between individuals explained from the point of view of influence is the result of one or more persons ("the others") having an influence on another ("the ego"). There is always a target person ("the ego") who is being influenced by a friend or some friends ("the others"). But nevertheless, that "ego" is also capable of joining ("the others") and vice versa, and therefore being the one who influences/pressures instead of the pressured. From the articles of Cohen and Kandel, the two processes: active selection, whereby individuals choose as friends those who are most similar to them in attributes considered important

and reciprocal socialization, whereby individuals influence one another regardless of initial similarities, have been steadily documented in scientific literature. For example, Mitchel and West (1996), in a study on smoking behavior and the influence of peers on it, boys between the ages of 12 and 14 who did not want to smoke chose friends who did not smoke, non-smoking social contexts and even left friends who started to smoke. Both Cohen (1977) as well as Kandel specify a third process: the deselection, or inclination to withdraw from friends whose attitudes and activities diverge from the path of similarity or if similarity weakens.

Therefore, when looking for friends, adolescents look among those who look like them, and have attitudes towards life, values and norms that they find suitable. And thus we return to the family context. It is in the family where boys and girls learn norms; acquire moral values and more or less healthy habits. In the research study done by Miller et al (2001), they conclude that among all the indices analyzed on family relationships and the influence on consumption, the most effective protective factors against substance consumption are warm and positive parenting practices, adequate monitoring of behavior, communication about drugs, the existence of clear norms and a system of precise values against the use of such substances. The lack of supervision and frequent conflicts act, meanwhile, as risk factors for substance use. Sims y Koh (2003) indicated that adolescent perception of the perniciousness or lack thereof of a conduct is one of the main factors that related to carrying out the conduct. In this manner, adolescent substance users may do so simply because the consumption is motivating in itself and they have not learned to perceive the harmful effects of the substance. The family that educates in a system of values contrary to substance use will give rise to its children mixing with friends who have value systems similar to their own, consider consumer behavior dangerous and, consequently, do not engage in it.

Friends, on the other hand, do not always exert pressure towards negative behavior such as substance use. In general, it is more often that they exert pressure towards behaviors considered socially positive, like studying or good behavior in school (Berndt y Keefe, 1996). Thus, it is easier and more often that adolescents find themselves pressured to not consume alcohol on a weekend when they are on medication, to the contrary (Sánchez-Queija, 2007). In another empirical study on the consumption of harmful substances (Maxwell, 2001) it is shown that the influence of peers is exerted as much to begin

chewing snuff or drinking alcohol, or to continue said behaviors, as to cease the mentioned conduct.

In any case, we must not forget the risks entailed by allowing information about substances to come from the context of peers: although this group will exercise more positive than negative influence, we cannot forget that group mates have less and more distorted information than parents and adults in general. In the group of friends, myths such as the following abound: cannabis is not bad because it is a natural plant, that it helps get you "in the mood" before sex, or that a joint is less harmful than a cigarette. This information, based on being heard in different settings and, especially, if transmitted by a high status group mate, takes on an element of truth. For this reason, although it is well-proven that information alone does not reduce substance use, it becomes essential that it be parents and adults in general who provide truthful and verifiable information in a language and tone understandable to adolescents.

Although, as previously stated, adolescents choose friends who are similar to them and the pressure the group exerts is more positive than negative, we must not forget that it is in the environment of the group of friends where there is access to consumption substances and, that it is in the group, emboldened by the heat of the moment or adapting to unwritten rules, where adolescents begin to experiment with different substances. It is not the role of a villain and several good guys, but rather company at the time of transit through the period that is growing up which we have named adolescence. Therefore, it becomes important that parents have created, prior to the arrival of adolescence, a climate of trust and mutual respect that will lead adolescents to share their fears and concerns with their parents, including those about substance consumption.

TAKE AWAY MESSAGE

The absence of a suitable family environment leads adolescents to not feel loved and accepted unconditionally, something they expect from the family. Boys or girls may in such cases turn to a peer group which views the intake of alcohol or other substances as normative, a form of socialization and a hallmark of the group.

Despite the general consensus around the idea that the group of friends is one aspect to consider in the prevention and study of drug use, it is quite clear that in general, their influence is outsized and is given greater value than it really has.

In general, there is substantial continuity between the family context and that of peers. Boys and girls will seek friends with whom they share an attitude toward life, and that attitude will have been learned in the family of origin.

Before concluding these points we want to emphasize three issues (Steinberg and Morris, 2001). First, as we have already explained, many of the

problems that appear during adolescence have their origins in childhood, which highlights the vision of development as a continuous process, and of adolescence as a debtor stage to previous years. Secondly, some of the problems experienced by adolescents are transient and resolve themselves at the beginning of adulthood. This is true of drug use, which most boys and girls decrease upon starting a relationship, entering the labor force and adopting typically adult roles. Finally, it seems important to differentiate between occasional experimentation and frequent involvement in substance use situations. While the former is characteristic of sensation seeking typical of the adolescent years, the latter may be an expression in definite terms of serious problems with more damaging consequences for the adolescent.

UNIT 4: DRUG DEPENDENCY PREVENTION PROGRAMS IN THE EDUCATIONAL FIELD

In Figure 4 we propose a short summary of some issues raised in the preceding paragraphs. An appropriate family education involves good affective relationships, communication while setting norms (i.e., an authoritative parenting style); teaching about the use of free time and the education in positive values which leads the adolescent to internalize the need to have healthy lifestyle habits, and to choose friends with similar values. We've added – although we have not previously developed it – the importance of a cohesive family environment in which mutual support is felt daily. We also want to draw attention to an issue that has not emerged, nor has it appeared at any moment, but in everyday life is often related to substance consumption: the family structure. Research shows that divorce, single parenthood or living in extended families is unrelated to drug use. Family dynamics and not structure are what can lead to dysfunctional behavior in the different family members.

Figure 4. Family protection factors from the consumption of substances

A family intervention program from the school must take into account all these aspects, which as we can see; it must not only help families with respect to substance use behaviors of sons and daughters, but also in the positive and comprehensive education of adolescents. Recipes for the education in the responsible consumption of alcohol, tobacco, cannabis and other substances are no different than those for the positive education of children in general. But above all, an action plan run from the school should try to reach the parents of adolescent students, not just those who are more concerned about the education of their children and come to the center frequently – possibly, these are the ones who will least help the program since they are already involved in the education and positive development of their children – but also those who normally do not attend. Although there are no recipes on issues as personal as the ones we are dealing with in this chapter, we will try to sketch an outline of what a secondary school teacher can do to get families to participate in the child's educational process that is carried out from the school.

1. It is important that *contact with families* be perceived by them as a normal part of the educational process of their children, in spite of them already

being "a bit older". In this regard, we need not wait for problems exist at the center to connect with the family. Hence, it would be ideal to:

2. *Schedule regular appointments* with the families, starting with a presentation at the beginning of the course to explain the academic and personal objectives of the school year, ask parents about their interests and what topics to cover during the rest of the visits. At this first meeting decisions can be made about dates and work topics in group meetings for all the parents of pupils in a given classroom, parental small group meetings and individual meetings.

3. For those parents who find it truly difficult to come to the center, an agreement can be reached about the use of a *school agenda* which may take the form of an electronic portfolio so that the adolescent does not always see the information contained in it. In said agenda, parents and tutor share their concerns about the child on a weekly or monthly basis. This document can permit the detection of dysfunctions in one context or the other.

4. *Involve parents in extracurricular school activities*, conducting open houses in which fathers and mothers can learn about the daily lives of their children at the center or allowing parent participation in trips, workshops, theater productions, etc.

5. Adapt the center´s parent visiting schedules so that visits can actually be done (i.e. *adjust the parent conference schedule* so that it does not coincide with regular working hours.

6. Assertive Communication with parents, without judging or condemning them based on their children's behavior. Although we know the influence that parental education has on child development, it is important to make parents feel they can properly educate their children (perception of efficacy), pointing out the positive points about the child and the relationship with the parents, and not focusing on the negative. Over the course of the scheduled sessions, we can help parents find tools to assist in the education of their children.

7. Show interest in the personal development of adolescents, not just in their academic development.

8. If necessary, request assistance from the school counselor and/or know the resources available in the area to help with those problem behaviors of children which cannot be resolved at school.

On the specific issue at hand, education in the non-consumption or the responsible consumption of substances, there are many programs developed by educational institutions that can be used in some of the scheduled meetings with parents. These programs, which as we have previously clarified, are based on acquired knowledge on the positive education of children and not only on affecting drug addictions and usually have the following structure:

1. Introduction. This introduction can be used to justify the session dealing with substance consumption, clarify some theoretical concepts about why children use substances, learn about the biological, psychological and social changes experienced by adolescents, or simply for group members to get acquainted with each other.

2. Objectives of the session. Can be adapted based on the approach agreed upon with the parents of our students.

3. Information on substances and their effects. Although it has been proven that knowledge of the effects of substances is not sufficient for the absence of consumption, it is important that this knowledge exist. We have already established that adolescents listen to their parent's opinion more so than it might seem at first glance. Therefore, it is essential that the information parents give about drugs be accurate and well founded. If necessary, parents can be provided with web addresses and brochures prepared by the health ministries and councils.

4. Further information on drugs. This additional information may cover the difference between experimental use, recreational use and abuse, data on consumption prevalence in the region; taxonomy of drugs in terms of use or consequences; stages and patterns in drug use, etc.

5. In some cases it may be effective to not present a specific session on drugs, but rather one about adolescents and their characteristics. This session would clarify adolescent characteristics, physical, social, families and adolescents. Unbeknownst to the parents of the students, we will be giving best practices on how to educate children that will be directly affecting the education in the non-consumption or responsible consumption of substances.

6. Risk and protection factors. In this section, it is good to include, along with family risk and protective factors, others related to the peer group, the media, individual, etc. Relating specifically to the family, concrete examples of attitudes and behaviors that encourage family communication and the establishment of favorable educational styles should be included. Role-playing techniques are usually effective, as are experience sharing between the different members of the group. At other times, programs include paper and pencil activities which allow relevant information from parents to be obtained and myths and preconceived notions to be laid to rest. At any rate, it is important to not focus on negative behaviors, because in that case parents know what they are doing wrong but not how to do it better. Therefore, it is necessary to illustrate models of positive interaction. If the teacher does not feel capable of leading a group in this section, collaboration may be requested from professionals at associations of ex-substance consumers, the school psychologist or a professional from outside the center.

7. At the end of the session establish conclusions or take-home messages that focus on the most appropriate behaviors: reinforcing positive behaviors, fluid family communication, absence of corporal punishments, seeking positive solutions, etc...

8. Although at first glance it may seem extremely difficult to carry out this type of session, prepared materials are available which provide models for all the activities to be performed during the session and how to conduct each so that they can be implemented by the tutor of a course in which adolescents are enrolled.

SELF-ASSESSMENT EXERCISES

For many years pedagogues have been advising that assessment is a privileged learning situation. However, formal education often uses assessment only as way to assign a numerical score to students, which serves to certify whether or not progress is being made in the course. The activities that follow are aimed at assuring that the student continues learning about the topic before us. If at any time you use information that was not given in the course, we ask that you cite and reference the place you extracted the information so as to corroborate the relevance and adaptation of the information source.

1. Separate the following questions into two columns: one relating to family risk factors for substance consumption during adolescence, and the other to protection factors:

Limited affective relationship, positive emotional climate, parent–child avoidance of communication about drugs, lax standards, unconventional family structure, a sense of trust, setting limits, family conflictivity, explicitly stating values and healthy lifestyle habits, sharing activities and leisure time, substance use by parents, permissive attitude about the consumption of substances; supervision of: activities, acquaintances, places of leisure; parenting style: *authoritarian, authoritative, neglectful, indifferent*

Solution:

Protection Factors	Risk Factors
- Positive emotional climate	- Limited affective relationship
- Setting limits	- Parent–child avoidance of communication about drugs
- Explicitly stating values and healthy lifestyle habits	- Lax standards
- A sense of trust	- Substance use by parents
- Supervision of: activities, acquaintances, places of leisure	- Permissive attitude about the consumption of substances
- Sharing activities and leisure time	- Parental Style neglectful and indifferent
- Parental Style authoritarian and, above all, authoritative.	

Unconventional family structure is not a risk or protective factor.

If excessive, family conflictivity becomes a risk factor, but a medium conflictivity associated with a positive emotional climate, promotes in adolescents the need to discuss with their parents the reasons for the conflict, and therefore the internalization of the norms, and a better mutual understanding, and ultimately, a better adjustment of the boy or girl.

2. Make a list of at least five subjects that you would discuss at a work session with parents about adolescence and substance consumption.

Possible Solution:

a) Myths about drugs (What are they? And what real effects do they have? Demystifying some issues that are taken for granted, such as that cannabis is less harmful than tobacco because it is a type of grass)

b) Myths about adolescence (Give a clear idea of what adolescence is, which issues are expected and not expected of an adolescent. Demystify the negative idea of adolescence)

c) Individual factors that affect the consumption of substances during adolescence (low self-esteem, sensation seeking, antisocial attitudes and low norm conformity, dissatisfaction with the use of free time, positive attitudes about drugs, distorted information about drugs, deviant group of friends, lack of self-control, stressful or critical life situations poor assertivity)

d) Family relationships during adolescence:

e) Parental styles: the role of *monitoring* and affection

f) The importance of communication, although it leads to discussion in an affective environment

g) Family modeling: parents as examples for their children

h) Group of friends (what are they like, what kinds of activities do they do, what influence do they have over the adolescent and to what extent can they exercise it, how are they chosen, etc)

i) Leisure and free time

j) Where to go for more information (physical locations and websites updated and reliable)

3. Design a comprehensive activity that you would implement at a session with parents. It must be designed with sufficient depth, so that any other teammate could carry it out without the need to consult you further.

This activity can be varied by asking participants to seek an activity from a program they know and implement it in their center (It is important that it be carried out in a public place within the platform, so that other program participants can see them and thus have more examples of activities))

An example, taken from:

Oliva, A., Parra, A., Luna, D., et al. (2008). Programa de ayuda a Padres y Madres. Sevilla: Junta de Andalucía.

ACTIVITY: DRUGS, MYTHS AND BELIEFS

Length:	30-40 minutes
Objectives:	Know the beliefs we have with respect to drugs in general.
	Debunk myths and misconceptions
	Reflect on dialogue as the best tool in the prevention of drug use.
	Know information about the different types of drugs and their effects.
Materials	Pencil and paper.
	Myths and Beliefs about Adolescent and Drugs.

Developing the Activity

The session coordinator explains to participants that this activity is carried out to find out what we know or think we know about drugs. To do this, a copy of the index card "Myths and Beliefs", on which are a series of statements, is distributed to each attendee. Individually, participants should read the statements and mark the box corresponding to T if one believes the claim is true or, conversely, F if one thinks it is false. The coordinator will allow five minutes to complete the index card. After these five minutes have elapsed, the coordinator will start reading the first myth and ask the participants their opinions and arguments about why they believe that the claim is true or false. Later, you will state the reasons why it is true or false based on objective data. Successively perform this operation with all statements.

Index Card: MYTHS Y BELIEFS ABOUT ADOLESCENTS AND DRUGS

Reflect on whether the following statements are true or false and mark the corresponding box:

1. Some adolescents take drugs to feel free. T – F

2. If an adolescent tries a joint (marijuana cigarette), she/he will be unable

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to avoid the continuation into taking other drugs. T − F

3. There are hard drugs and soft drugs. The first are harmful and the latter are not. T − F

4. If boys or girls only get drunk on weekends, they do not have a problem with alcohol. T − F

5. Intoxication occurs when a certain amount of a drug is taken and the body is unable to eliminate or transform it. T − F

6. You cannot get hooked on cannabis by smoking joints (marijuana cigarettes). T − F

7. Boys consume more tobacco than girls, whereas girls consume more alcohol than boys. T − F

8. The impulse that leads to continued drug-taking is what we call dependence. T − F

Below is the script the coordinator can use to analyze the extent to which each of these myths corresponds with reality.

1. Some adolescents take drugs to feel free.

True. It is true that some adolescents take drugs to feel free, for the sake of doing something forbidden, to find a new lifestyle, but it's not the only reason. Drugs can also be taken out of passiveness and to escape (to pass time and flee from problems), to adapt to established social norms (to study, out of habit, to facilitate social contact), to calm the nerves and to experience new pleasurable sensations.

2. If an adolescent tries a joint (marijuana cigarette), she/he will be unable to avoid the continuation into taking other drugs.

False. Smoking a joint does not necessarily mean that the adolescent will continue taking the drug nor, eventually have to try other drugs. There are certain phases in the consumption of substances that imply that if the boy or girl is using a particular type of drug, he or she has already used others previously. However, it does not necessarily imply that the adolescent has to continue using other substances considered "more dangerous. Said phases are:

1. Drinking beer and wine

2. Drinking strong alcoholic beverages

3. Consumption of cannabis or hashish

4. Consumption of other substances (cocaine, heroin)

3. There are hard drugs and soft drugs. The first are harmful and the latter are not.

False. The distinction between hard and soft drugs is inadequate. This terminology suggests that some drugs are harmful while others are not, which is incorrect. All drugs are harmful to people, although some are more dangerous than others and have less visible short-term effects on health.

4. If boys or girls only get drunk on weekends, they do not have a problem with alcohol.

False. Alcohol consumption among students between the ages of 14 and 18 mainly occurs on weekends. Continual and abusive consumption can cause disease in all the organs, especially in the digestive and circulatory systems, and severe psychological disorders.

5. Intoxication occurs when a certain amount of a drug is taken and the body is unable to eliminate or transform it.

True. When a certain amount of a drug is taken and the body is unable to eliminate or transform it, intoxication occurs. It will have different symptoms depending on the type of substance consumed and will remain until transformed or eliminated by the body. Depending on the amount consumed, the characteristics of the organism at the time and the characteristics of the substance, intoxication can present very serious symptoms, even inducing coma or requiring emergency medical intervention.

6. You cannot get hooked on cannabis by smoking joints (marijuana cigarettes).

False. Regular consumption of cannabis can lead to dependence, such that its abrupt discontinuation can lead to nervousness, insomnia, irritability and depression. Bear in mind that when mixed with tobacco, there is also the risk of developing nicotine dependence.

7. Boys consume more tobacco than girls, whereas girls consume more alcohol than boys.

False. Alcohol consumption prevalence is very similar between girls and boys. The consumption of legal drugs, especially tranquilizers and tobacco, is more common among girls (in the case of tobacco with major differences), while alcohol and all the illegal drugs are consumed more by boys.

8. The impulse that leads to continued drug-taking is what we call dependence.

True. Dependence is the set of behaviors and reactions including the impulse and need to take the substance on a continuous or regular basis, be it to feel its effects or to avoid the discomfort that the deprivation of the substance produces. This state may or may not be accompanied by tolerance, which would be the progressive adaptation of the body to consumed substances, such that to feel the same effects, it is necessary to increase the intake amount.

Activity Summary

To end the activity, the session coordinator will conduct a theoretical exposition with the theoretical content presented on the subject.

It is proven that dialogue with daughters and sons is the best tool for the prevention of drug use. Therefore, parents must know the different types of drugs and their effects in order to give their children clear, reliable, accurate and objective information about them.

The program includes information about different substances and their consumption prevalence. This information can and should be obtained and updated and contextualized in each country where the program is implemented, so do not add it here.

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MODULE III:

Analysis of Drug Use Prevention on a Community-wide Scale

Daniel Lloret Irles

José Pedro Espada Sánchez

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Analysis of Drug Use Prevention on a Community–wide Scale

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Unit 1. Risk and protective factors.
1.1. Definition.
1.2. General characteristics of Risk/Protective factors.
1.3. Risk and Protective factors: macro social dimension.

Unit 2. Definition of community level prevention programs.
2.1. Typology of Community Level Prevention Programs

Unit 3. Objective and structure of community level prevention programs.

Unit 4. Examples of community level prevention programs.

ANALYSIS OF DRUG USE PREVENTION ON A COMMUNITY-WIDE SCALE

Daniel Lloret Irles and José Pedro Espada Sánchez

Universidad de Elche

SUMMARY

Numerous studies support a drug use and abuse development model based on the subject's relationship with his or her environment (Calafat et al., 2004). Drug consumption, its causes and consequences, is a multifaceted phenomenon that can only be understood if viewed from different perspectives. This course is devoted to a socio-cultural perspective and maintains that a genuine preventive policy cannot treat as abstract the socioeconomic structure in which drug users and non-drug users grow up. It takes into account the cultural aspect of the use of certain substances by specific groups.

The community sphere, along with those of family and school, constitutes one of the principal axes of action for carrying out preventive interventions. Unlike other areas of prevention, community prevention is not addressed to a specific population type. To the contrary, what characterizes community prevention is not the target population or the specific environment where the interventions are realized (family, school, workplace, institutions ...), but rather that its interventions take place in public spaces and can be targeted to different segments of the population. In this sense, community prevention chooses its settings and techniques based on stated objectives and the population group to be reached.

Community Prevention addresses the problems and needs of an entire community, such as a big city or a small town, or a specific population group, and to do so it moves preventive actions closer to the places that said population frequents (e.g., a leisure or recreational area). In these work areas or settings, strategies and interventions aimed at changing the cultural, physical, social and/or economic environment are developed with the aim of reducing and/or preventing drug use or the harm stemming from it.

Community interventions are reciprocal complements to interventions realized in family and school settings. Research results on the effectiveness of

prevention programs highlight those programs that assume, in a coordinated manner, activities in all three areas, compared to programs that are realized in one area exclusively. When planning a strategy aimed at reducing drug demand we must bear in mind that people in general and youth in particular, divide their time among these three social settings: family, school or workplace and society. That the intervention will be implemented in a place where the target audience is available and reachable must be taken into account at the moment of designing an intervention. This observation is especially applicable in community prevention, since the public transits freely through different settings, contrary to what happens in school or work environments. An adolescent spends on average seven to eight hours daily (Monday to Saturday) in an education center. As for the time dedicated to being with friends, Calafat et al. (1999) conclude in a study conducted in several European cities that young people spend between four and seven hours each weekend night on recreational activities in leisure environments. In a recent study conducted in 2007 by the authors with a sample of secondary school students, more than half of those aged 14 to 16 report that they spend a lot of time each week in leisure venues and drinking bars.

Adolescence is characterized by a sense of rupture with the world established by adults, which until then was assumed to be sole and unquestionable. The natural tendency of adolescents makes them feel the need to question the adult world and differentiate themselves from it. In this process, many young people come to perceive time outside the family and school as their authentic world; a world in which they explore new value systems, and acquire new knowledge, which often comes into conflict with prior learning from the family and school. The acquisition of new cognitive abilities leads adolescents on a relentless pursuit of new knowledge that had been preserved from them, and gives them the opportunity to discover an unexplored world. At this evolutionary juncture, new information about drugs appears: effects, consequences and prevalence of use.

The family, school or workplace constitutes defined environments in which people develop certain relationships and roles. We can consider them social micro-systems, those in which the subject establishes his/her closest personal ties. The group of friends, especially important in the adolescent-juvenile population, is also considered a micro-system. These social micro systems are embedded in a higher system, or macro system, that pervades their values, guide their attitudes and conduct and definitely modulates their potential to develop.

This macro system is the natural action space of community prevention, as it is a wide space noted for being the place and time in which different social collectives engage in recreation and leisure. The diversification of leisure options and their segmentation by social groups and age has led to an endless array of settings that can be accommodated by community prevention programs, based on the audience that we want to reach and the objectives sought by the intervention.

Community Prevention has adopted various names and approaches in responding to different settings and populations. Thus, among the offerings of community prevention programs we find universal, selective and indicated prevention programs, as well as primary, secondary and tertiary ones. What is considered community prevention runs the gamut from Leisure and Recreation Programs, directed to the general population and whose objective is to discourage substance use by offering healthy leisure, to low threshold programs, aimed at substance users seeking to reduce the harm associated with substance use. Consequently, community interventions are a heterogeneous group of measures aimed at avoiding or reducing substance consumption or the damage associated with it.

In this chapter, we will try to mark out and define what is meant by community prevention. The same will be done for the interventions realized within community prevention, looking at what they entail and how they are classified. We will review the main risk factors, such as certain societal characteristics that can be considered predisposing to drug consumption, as well as the conditions of recreational contexts that contribute to substance consumption.

UNIT 1: RISK AND PROTECTIVE FACTORS

1.1. Definition

The concept of risk factor comes from classical epidemiology, and refers to the frequency and distribution in the population of certain causal agents associated with the occurrence of a given pathology.

In this sense, Clayton (1991) defines risk factor as that "individual attribute and/or feature, social condition and/or environmental context which increases the possibility of drug use/abuse (beginning), or a transition in the level of involvement in them. On the other hand, we will understand as protective factor every individual attribute and/or feature, social condition and/or

environmental context that inhibits, reduces or attenuates the possibility of the use/abuse of drugs, or a transition in the level of involvement in them".

Traditionally, researchers, clinicians and other professionals working in the field of drug dependency prevention and treatment have addressed their work by assuming a prior approach, a model to guide them and help explain the why behind the initiation and maintenance of substance consumption. In turn, this theoretical premise allows them to design and direct their interventions towards specific objectives and not others considered of less etiological importance.

These models are:

- Biological model (medical).

- Ethical/legal model (moralistic).

- Psycho-social model.

- Socio-cultural model.

Currently, the approach most accepted by the scientific community, and therefore taken up by public administration in its policies to fight against drug use, is the Bio-Psych-Social Model; an integrative model that aims to address prevention, treatment and rehabilitation from a multidisciplinary approach.

The model we present situates the individual at the center of a complex system of influences and interactions that modulate the likelihood of an initial substance use occurring or that this use be sustained and strengthened. The system is organized into three levels corresponding to the three shades of blue in the figure. The levels are mutually permeable, and therefore exposed to influences from other levels or actors. All of this generates a dynamic network whose result determines the level of risk we are exposed to and our ability to resolve critical life situations.

In the center is the person who provides a structure of biological and psychological intrapersonal factors. From this perspective, the personality profile, genetic makeup and biological vulnerability to suffering certain types of mental or physical disorder will partially determine the person´s ability to adapt to his or her social environment and the likelihood of initiating a first substance use.

The next level, called micro social, corresponds to the reference groups with which the individual most intimately coexists. These groups are in order of

appearance: family, school and friends. Each groups together a number of specific factors that influence the individual by increasing or decreasing the chance of confronting an initial substance use. The individual is not considered a passive person at the mercy of the influence of micro social groups. Quite the contrary, their active participation in them results in dialectical pressures that make each case unique. Research seeks the common denominators and relationship patterns among factors that recur most frequently to estimate the risk of substance use and design preventive interventions. Risk factors derived from these groups are numerous, and it is not the objective of this course to dwell on them. Among the other factors are: parenting styles, parental modeling, group and/or family attitudes about substance use, peer pressure from the group of friends towards substance use, school adaptation and information about drugs and their effects.

The third level, the outermost, is the macro social. At this level, the cultural and socio-economic environment in which the person grows up is defined. Agents acting at this level are more abstract social entities, but no less influential: the media, public administration, industry and society in its broadest sense. Among them a system of values is constructed in which some values predominate over others that remain secondary. In Western societies, where drug use has increased relentlessly since the sixties, criticism has been raised about the promotion of a series of values that are in line with the economic system, but are the basis of a vision of man built on limitless individual enrichment.
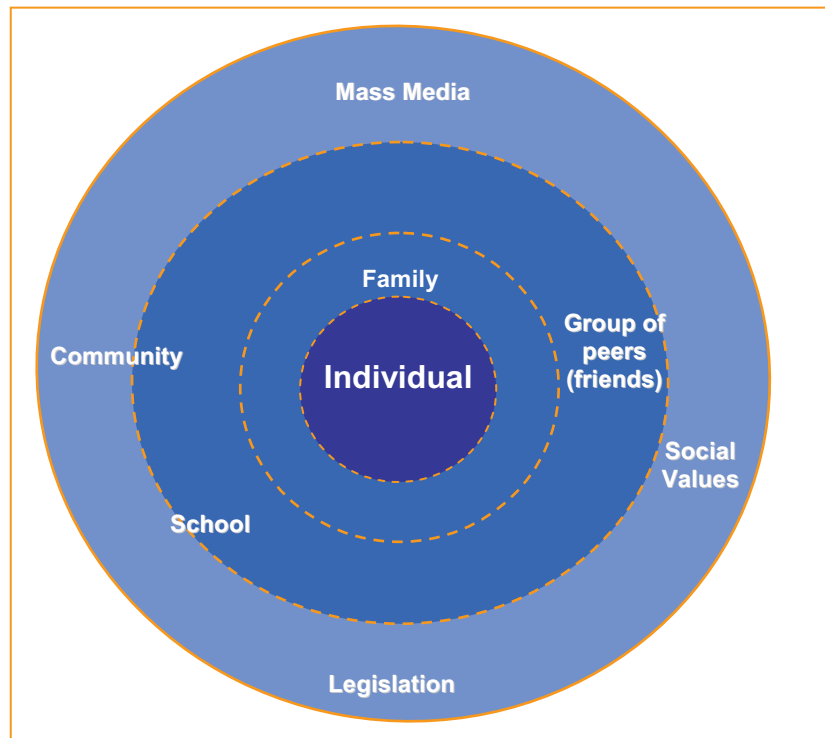
Figure 1. Bio–Psycho–Social Model.

1.2. General Characteristics of Risk/Protective Factors

Non–determinism

Drug use is a multifactorial phenomenon (i.e., it does not respond to single causes). Although risk factors have been identified that explain the initiation or maintenance of substance with greater accuracy and probability, their presence is not sufficient to predict the emergence of substance use behavior. The complexity of the relationships between risk/protection factors and drug use precludes a simple and reductionist explanation, and a causal relationship between one or more risk factors and drug use cannot be established. Research has only been able to demonstrate associations between certain situations and drug use, but it has not been able to demonstrate the causality potential of these factors.

General

While some factors such as accessibility to substances, the presence of family models of substance use or erroneous information about drugs and their effects are considered specific to the initiation and maintenance of drug use, a larger part of the risk factors that have been identified as predictors of drug use are also risk factors for other problem behaviors. For example, general factors such as the lack of affection during childhood, the lack of clear norms or having lived in an environment without access to educational and/or social resources also explain the emergence of other maladaptive behaviors manifested in, among others, violence, poor school adjustment, and unwanted pregnancies. Likewise, numerous studies have shown that the presence of aggression in parental figures is a wide spectrum factor (i.e., valid for many situations and populations.

Difficulty of Studying Factors in Isolation

Risk factors show dynamic behavior (i.e. they mutually relate and potentiate), which hampers the ability to isolate and individually explain them. For example, it is held that the vulnerability to micro social risk factors to which an adolescent is exposed depends on the presence of psychological risk factors. This explains how a reduction in individual competencies increases vulnerability to external factors. For example, an individual who has low assertiveness or inadequate social skills would be more susceptible to group pressure. The results of studies conclude that risk factors exponentially increase in force when joined together.

If the presence of risk factors increases the likelihood of problematic behavior occurring, the occurrence of these problem behaviors is, in turn, a maintenance factor of the problem situation.

The many factors involved in the genesis and maintenance of drug use, along with the sum of their effect when presented together, oblige researchers to control an enormous number of variables and their interactions. This requires huge sample sizes, which are not always available to researchers.

Likewise, from the perspective of methodological rigor, we must bear in mind that, following a criterion of immediacy with drug use, some factors are near, while others are remote. We consider those factors near whose appearance is close to the moment of the substance use (e.g., accessibility, perception of risk or peer pressure). The remote factors, by contrast, are those which occur long before the time of the substance use (e.g., parenting style, values structure,

parental models of substance use). Remote factors, having occurred in the past, are more difficult to subject to experimental control.

In short, factors interact with each other and form a dynamic network whose result corresponds to a level of risk. The following chart classifies the factors into three basic groups: personal, micro social and macro social, and illustrates the relationships between them.
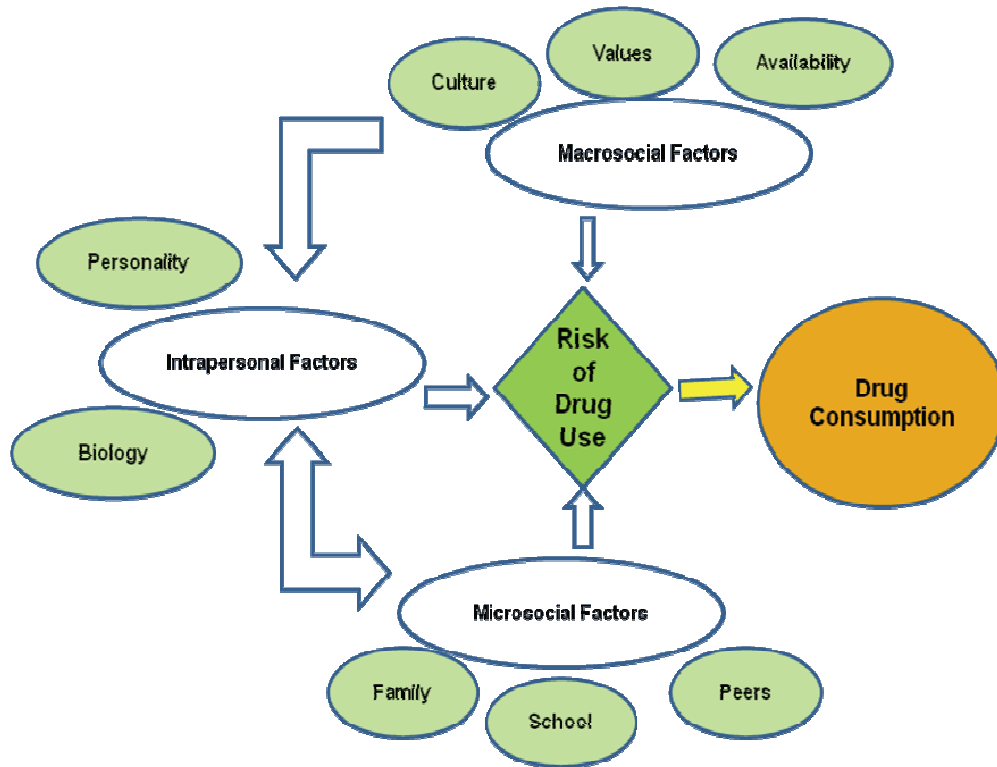

Figure 2. Personal, Microsocial and Macrosocial Risk Factors

1.3.   Risk and Protective Factors: Macro social Dimension

Far from seeking to do a reductionist detailed reading of the etiology and proposed solutions for the drug phenomenon in our society, this section will explore the characteristics of our society and their influence on the development of problem behaviors and drug use in particular. We will study how the individual interacts with his/her broader social environment (i.e., the macro social environment).

The following flowchart schematically illustrates the three levels [individual (only the psychological is represented), micro social and macro social] capable of affecting attitudes towards drugs and consequently, modulating substance use behavior. The relationship of the individual with the closest social environments, such as the micro social spheres of family, school, or group of friends, is the subject of other courses and, therefore, will not be studied in this course.
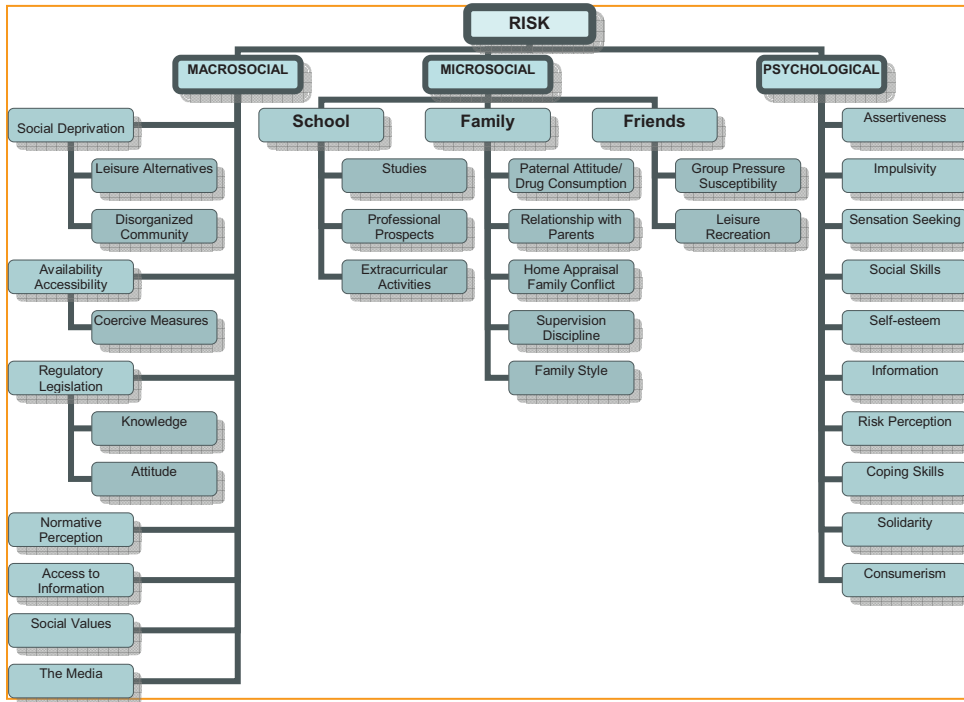

Figure 3. Clasification of risk factors in three levels: individual, microsocial and macrosocial.

Socio–cultural risk factors, due to their often general character and the difficulty of their methodological control as seen in previous sections, have been the object of less research; thus, they are supported by less evidence. Nevertheless, we agree with Becoña (1999) in asserting that socio–cultural predisposition constitutes one of the most important elements of the whole explanatory process on the initiation and maintenance of drug use. Major risk factors of a social nature are reviewed in this chapter.

Leisure Model: The Hegemony of Drinking Bars

The dominant leisure in today's young people is based on the culture of diversion associated with bars, discos and drinking areas as the main recreational component. It is a hegemonic model for many young people due to its being the most desired option and at the same time the most accessible one. A model, which has grown in recent decades and is still expanding, around which is woven a dense network of commercial interests that control and foster it. This mercantilist model fosters consumerist free time, in which the majority of leisure options have an economic cost, and if you do not have money, you can stay at home.

Certainly, a leisure model based on the alcohol industry, in which the maxim of "sex, drugs and rock and roll" has become an incontestable philosophy and a motto to achieve, is at first glance a clear risk factor for the consumption of alcohol and other drugs. Various authors agree in identifying the interest in going to parties with friends and frequenting bars in nightspot districts as a risk factor (Calafat, 2004; Navarro, 2000). Others argue that participation in cultural activities is a protective factor (Recio et al., 1989).

It would be unfair to not recognize the interpersonal functions and benefits that this model of leisure facilitates: it encourages socialization, offers the opportunity to listen to music and dance in common spaces, and facilitates sexual encounters. There are a number of authors who affirm that young people who have experienced sporadic drug use are better socialized (Parker 2003; Shedler and Block, 1990).

Under cover of this main model, youth subcultures have emerged in Western society that develop a separate and distinctive aesthetic through fashion styles, musical tastes and the design of unique environments. Likewise, they establish leaders and idols, relate stories and legends, hold their own acts and rites and forge values that define the group. With these components, powerful subcultures are built that give cohesion to groups (urban tribes), strengthen the identity of the group and grant existential meaning to the young people who participate in them. Subcultures often choose a substance as a cultural drug of preference. In this way, ecstasy is associated with the dance music of clubbers, cannabis with reggae music, and hallucinogens and entheogens with the hippy culture.

Social Deprivation

Epidemiological studies provide consistent results about the increased presence of drug use among members of communities that have a high degree of social and economic deprivation. Concurrently with drug use, these communities suffer violence, a greater risk of criminal behavior, a lower academic level, and other maladaptive behaviors (Smart et al., 1994).

It should be clarified that poverty alone is not a risk factor. The lack of resources and low expectations for improvement increase poverty´s potential risk when said marginality is perceived as a social grievance. This social comparison, in which the compared is situated in the worst position in the face of an opulent society on pompous display, is a source of unrest and tension. Likewise, underdevelopment is a source of unease to the extent that it is perceived as a social grievance. The lack of access to resources translates into a real difficulty to achieving social rights recognized as legitimate, namely: the right to housing, to a professionally rewarding and sufficiently paid job to support a family and enjoy free time, and the right to maintain a standard of living commensurate with the perceived average.

The most disadvantaged social classes have inferior access to resources and notice how their efforts produce meager results. Disappointment and a high level of frustration, which can turn into anger and hatred, stem from this situation. This social and psychological tension caused by class differences, predisposes to the search for rapid and accessible "escapes", allowing an ease in tension without addressing its causes.

Finally, it should always be remembered that risk factors are not deterministic; and therefore, most of the population living in conditions of social and economic deprivation do not have problems with drugs. These non problematic individuals are an interesting motive for the study of protective factors.

Disorganized Community

The lack of group cohesion and the absence of community resources capable of organizing the basic needs of the society converts the area into high risk and, thus, into a priority action area.

In communities with few or weak social ties, there is an increased risk of drug consumption (Hawkins et al., 1988). People living in these communities

present greater difficulty at the time of promoting feelings of attachment and feeling part of a community.

From this perspective, the objectives of prevention programs will be to:

1. Promote and strengthen social institutions and facilitate contact between them and the population.

2. Promote the creation of social networks committed to the well-being of their communities.

3. Develop stable structures through the provision of services needed to meet social needs.

4. Promote social education.

Catalano et al. (1996) argue that the links children establish with standardized society are strong protective factors for both improper drug use and other maladaptive behaviors. In selective prevention programs aimed at vulnerable children (i.e., children at high risk), it is recommendable to work on this aspect by strengthening ties with society and conferring on the individual a sense of service to society.

Some studies have found that the identification with a religious orientation acts as a protective factor. Religious identification probably does not act directly as a protective factor. Rather, it may be a mediating variable to develop protective factors related to it, such as the construction of a values structure and the development of community ties.

Social Values that Promote the Need to Consume

Being and Having

The consumer society model, in which being and having fuse into a same meaning, exploits and leverages hedonism and social envy as inexhaustible economic engines. The advertising industry, far from being an information service on the wide range of products and services of our opulent society, and aware of the mobilizing power of the consumption that contains social unrest, has become a Machiavellian needs creation system.

Those responsible for advertising and marketing deploy all their seductive skills to maintain in their audience a moderate and constant feeling of dissatisfaction, a sufficiently high and uncomfortable level to arouse the search for relief by means of accessing the solutions proposed by the advertising

industry itself, namely: buy the product that will resolve the previously created need.

With veiled maxims of the type "consume and you'll be happy," the free market system is upheld, and a society torn between ostentation and inequality is achieved. While the most disadvantaged classes are trapped between revolt and victimism, for not being able to achieve what others get and display through the most sensationalized media.

The system is designed so that the act of consuming, purchasing, is the true protagonist, above that of possessing, using and enjoying. Consequently, the entire manufacturing process has been redesigned to limit the useful life of the product, to schedule its obsolescence and plan the purchase of a new one. The aesthetics of industrial design age rapidly, the materials used have been manufactured with components that will lose their qualities in a short time, after-sales service prefers to replace than to repair, and parts and their assembly are often more expensive than buying a new product. The whole system requires that people maintain a purchasing power level capable of fueling industry, which only understands maintaining a steady growth in its turnover.

From all this, an excessive importance of economic success is derived. Only individual enrichment will allow acquiring more goods and services than others, and consequently success in a social comparison model based on the wealth standard. The lack of solidarity that is necessarily derived from this philosophy is accepted as a collateral effect. Something that, while not well regarded, one tries to avoid or justify in the interests of an individual opulence without limits.

Why wait, if I can have it now? The Power of Impulsivity

The acquisition of goods and services on short-term credit installments is on the rise. The "take it today and pay interest free in 12 months" has become the customary Christmas slogan and shopping centers have turned into pilgrimage destinations. Skillfully applying the principles of operant conditioning, short-term positive consequences of buying behavior are promoted on the grounds of delaying costs. The market promotes immediate access to benefits, pretending that the costs are unknown. Advertising messages are loaded with words that invite immediacy of action (now, already, do not think about it, last day, take it without obligation) and encourage saying yes without allowing time for doubt. From this perspective, critical reflection is one of the worst enemies of purchasing. Deliberating before a decision, thinking about whether you really need it, assessing whether I really want it or if my desire is transitional or

estimating the costs of the acquisition would mean desisting from a large number of purchase attempts.

In the realm of the personal, scientific evidence on risk factors has determined the relationship between impulsivity as a personality trait and drug use (Zuckerman, 1983). Likewise, these arguments bear a special parallel with the techniques used in treatments to break drug use habits, in which reducing the compulsive behavior by exercising reflection and anticipation of consequences is a central component of therapy.

Accessibility to the Substance

Substance accessibility is considered one of the major risk factors and its relationship with consumption has been repeatedly demonstrated through surveys in the general and student populations. Accessibility has a dual aspect: macro social and personal. The first refers to the actual availability of the drug supply on the market, which can be broken down into two dimensions: price and the frequency and proximity of points of sale. In this course we will address these "objective" aspects of the "accessibility" risk factor. In addition, the measures taken to reduce the availability of alcohol, tobacco and other drugs will be reviewed.

Accessibility, in turn, has a personal or subjective version consisting of individual perception of the ease of getting a particular drug. It is this availability that is measured in the European ESPAD survey when asked to respond on a Likert scale of six alternatives (from impossible to very easy) to the question, "*How difficult do you think it would be for you to get each of the following, if you wanted?*"

While perceived accessibility appears to be the truly relevant risk factor, this subjective aspect of accessibility depends in part on actual availability and the individual's ability to detect supply points. It further depends on the individual´s assessment of his or her ability to find and purchase the drug. As shown in the results of epidemiological studies, accessibility has a directly proportional relationship to substance use. That is, increased availability leads to increased consumption. This relationship has been established both for legal and illegal substances.
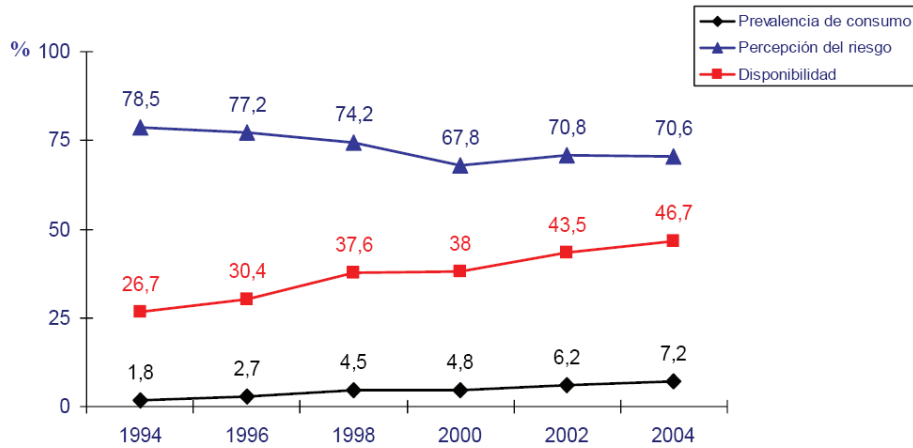
Source. School Survey 2004. Spanish Observatory on Drugs

Figure 4. Prevalence of cocaine use (last 12 months), perception of risk (consumption once per month or less) and perceived availability (easy/very easy). Spain (%) 1994-2004.

The chart depicts the evolution of six surveys carried out in Spain in the school population aged 14-18. There is a clear correlation between the accessibility to cocaine and its consumption. Over the course of ten years, the perceived availability nearly doubled, while consumption shot up 400%.

Accordingly, as we will see in paragraph 2.1.2., measures to control the accessibility of tobacco and alcohol by raising prices through heavier taxation or limiting the points of sale have resulted in a reduced consumption.

Social Perception of Risk

Like accessibility, risk perception is considered one of the factors that best predict substance consumption. The lower the perceived risk of using substances, the greater the prevalence of use will be (Johnston et al., 1989). The perception of risk is a factor that rests firstly with the individual, who is ultimately the one who evaluates the consequences of his or her behavior. Nevertheless, the valence and intensity with which an individual assesses the risk posed by taking a dose of drugs is strongly linked to the perception held by the society or culture to which he or she belongs. We understand social perception to mean how or what members of a particular culture or society interpret, imagine or think about something.

Sociological research findings show that speech trivializing the harmful effects of drugs permeate society and reduce the perception of risk. For

example, in recent years a strong social movement for the use of cannabis has developed in Spain. The organizational capacity of this movement has been demonstrated by the large number of groups, associations, meetings, exhibitions, websites and print publications that have emerged for the legalization of cannabis. Under cover of this social movement, two political parties whose electoral program focuses on the legalization of marijuana (Partido Cannabis por la Legalización y la Normalización (PCLYN) y la Representación Cannábica de Navarra-Nafarroako Ordezkaritza Kannabikoa (RCN-NOK) have been founded in Spain since 2003. Also, anti-prohibitionist movements, such as the Anti-Prohibitionist Association in Italy and the Alliance to Legalize Cannabis in the UK, are recurring in the rest of Europe.
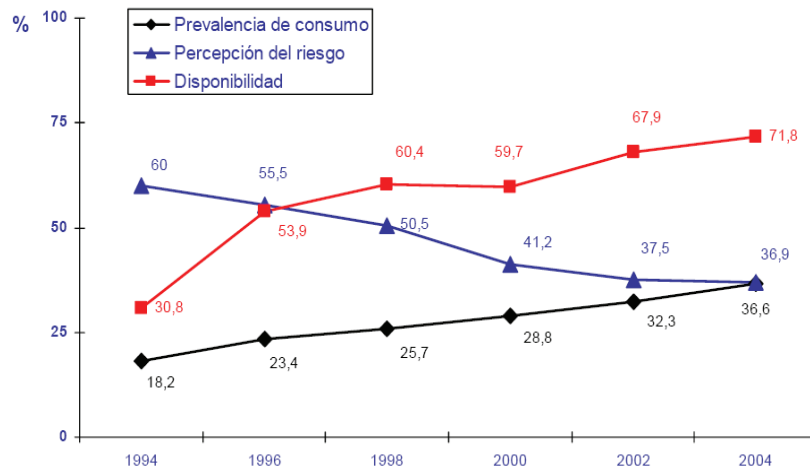
Source. School Survey 2004. Spanish Observatory on Drugs

Figure 5. Prevalence of cannabis use (last 12 months), perception of risk (consumption once per month or less) and perceived availability (easy/very easy). Spain (%) 1994-2004.

The results of the student population survey, which is conducted every two years in Spain, show an unequivocal relationship between cannabis use in the last 12 months (black line) and the perceived risk (blue line). Both variables maintain an inversely proportional relationship and their paths mark out a converging trajectory.

The chart shows the importance of beliefs about the harmful consequences of cannabis use, as it modulates the prevalence of consumption. In 1994 60% of adolescents believed that substance use had negative consequences. Ten years

later the perception of risk fell 24 proportional points. The evolution of substance use followed an inverse evolution, doubling in the same decade.

Legislation

The legal framework is a powerful tool at the service of public policies as regards the control of drug consumption and trafficking. Regulations allow hindering and reducing accessibility to substances and limiting their consumption up to penalization. Nevertheless, raising substance use to the status of criminal offense has failed to put a stop to it.

In Europe, laws criminalizing substance use coexist with more lax ones that do not consider substance use a crime as long as it is not conducted in public. Beyond the legal provisions, the reality is fairly homogeneous since prison sentences for possession of quantities that can be justified on the basis of self-use are usually commuted to attending treatment.

Results of evaluations on coercive measures with a regulatory basis show their effectiveness as a protective factor. The establishment of clear regulations, accompanied by a monitoring and control system and a sanctioning regime, is an excellent tool to prevent or reduce drug use. The difficulty of implementing an effective monitoring system on a community-wide basis makes these types of measures more likely to be applied in bounded spaces such as leisure venues, bars, schools or workplaces.

As with other factors markedly community in character, such as risk perception or accessibility, the protective capacity of the regulations does not only depend on their existence. The population that the regulations are aimed at, and that is intended to be protected, must also know the regulations to ensure that these fulfill their preventive aims.

Mass Media

Is Hollywood alcoholic and addicted to nicotine?

Gunasekera et al. (2005) analyzed the 87 most viewed movies since 1983 for scenes involving drug use and its effects. They detected 53 episodes with sexual content in 28 movies and only one of them alluded to the use of condoms. 8% of the films included scenes of cannabis, while 7% had non-injectable drug scenes. 32% of the films analyzed showed scenes of drunkenness, while tobacco smoking was present in 68% of them, with a tendency to show satisfactory tobacco use without any negative consequences.

According to a study by Dartmouth Medical School, 95 percent of the 250 highest-grossing movies released from 1988 to 1997 showed characters smoking tobacco. In this study conducted by Sargent (2005), clear proof was given of the association between witnessing scenes of smoking in movies and the tobacco use among adolescents.

Engels et al. (2009) conducted a study with two groups randomly assigned to one of four experimental conditions that varied in exposure to alcohol scenes in movies. The results conclude that there is a link between exposure to drinking scenes and subsequent alcohol consumption.

Hanewinkel and Sargent (2009) conducted one of the few longitudinal studies on the effect of exposure to audiovisual content in drinking behavior. They measured the prevalence of alcohol consumption in a sample of 2,708 German adolescents who had never consumed alcohol. A year later the rate of television exposure was measured, taking into account whether the youth had television in his or her room and whether he or she had seen movies in which alcohol was drunk, among other variables, and compared with the problematic use of alcohol. The authors concluded that the exposure and having television in the room are independent predictors of problematic alcohol consumption. They suggest that restricting access to audiovisual content can play a protective role.

UNIT 2: DEFINITION OF COMMUNITY LEVEL PREVENTION PROGRAMS

Community prevention is a broad term that includes those actions that take place in a social framework and in which individuals participate regardless of their occupation or employment and family status. Other authors define community prevention as all activities carried out in the community setting that stimulate the participation of community representatives or institutions (e.g., schools, youth centers, communities of neighbors, neighborhoods, associations, etc.) in order to intervene in people´s immediate environment and facilitate their participation in the social context (Alonso, Salvador, Suelves, Jiménez y Martínez, 2004).

The community context offers a wide range of actuation that can be defined by exclusion from other areas; and therefore, it encompasses everything that is not reserved for more specific areas such as school, family or workplace, to cite the most common areas. One might include the following as the main settings of actuation for community prevention: recreational night life, media,

public urban spaces and public facilities. Developed within these areas are preventive interventions aimed at promoting healthy lifestyles and reducing the influence of those social conditions likely to cause damage, discomfort or tension.

From a health perspective, the differentiation of legal and illegal drugs lacks utility. Although the legal framework implies a differentiating element, similar preventive principles apply in both cases and the measures and techniques used are aimed at reducing the availability and fostering a social attitude against substance use.

2.1. Typology of Community Level Prevention Programs

The community context provides an extensive panorama of possibilities for intervention. The range of social segments that are accessible through the community context, the emergence of new supports and the definition of new objectives, make attempts to classify the variety of channels and formats used by community prevention inscrutable. A possible classification could be the classic primary, secondary and tertiary one that takes into account the relationship of the target population with drug use. More recently, in 1994, the Institute of Medicine (IOM) established a classification of prevention programs based on vulnerability to consumption (i.e., the cumulative presence of risk factors). From this perspective, interventions are organized into three levels: universal, selective or indicated.

Taking as criterion the format adopted by the program or preventive intervention and the medium used to reach the target population, we arrive at one of the possible classifications which, like any other, contain a certain degree of overlap that make it inexact. According to this criterion, we can sort interventions into four types:

a) Interventions through the media.

b) Programs for the dynamization of social actors and resources.

    1. Training of mediators

    2. Creation of social networks.

    3. Staff training programs for the personnel of leisure venues.

c) Leisure and recreation programs.

    1. Health Promotion.

2. Harm Reduction.

d) Coercive measures through regulatory regulations (environmental measures).

2.1.1. Interventions through the Media

Interventions in the media adopt many different formats ranging from short and repeated messages –advertising spots-to more elaborate areas such as reports and interviews. This type of intervention aims to inform and encourage individuals towards a reflection aimed at abstinence, while reinforcing the various prevention actions and programs carried out in specific spheres and the communicative actions launched from the various social communication supports. As with other types of actions, their effectiveness is enhanced when coordinated with more structured prevention programs.

There is sufficient evidence on the effectiveness of brief interventions in the media (Derzon and Lipsey, 2002, Longshore, Ghosh-Dastidar and Ellickson, 2003). Analysis of the assessment of the effectiveness of preventive ad exposure concluded a reduction in the likelihood of marijuana, crack and cocaine consumption (Block, Morwitz, Putsis and Sen, 2002).

Apart from the content of preventive messages, it becomes necessary to revise the traditional formats of these messages designed for classical media supports (i.e., radio, television and print, and their communication styles) in order to update and adapt them to an adolescent discourse strongly linked to the aesthetic of the Internet and video games. The new information and communication technologies offer the possibility to participate in communicative discourse, which increases audience involvement. Empirical evidence maintains that prevention programs that include dynamic and participatory components are more effective than those based on the mere transmission of information. Another communication support or channel widely used in preventive programs, health promotion or even as support for treatment is Short Message Service (SMS).

Internet: A new support, a new generation of continuous change

Within the broad field of care and prevention of problems arising from drug use, the Internet is turning out to be a breakthrough; since, it facilitates the exchange of knowledge and experience among professionals on the one hand, and on the other the implementation of on-line preventive programs destined for society in general. In this way, the Internet can serve as a medium in which

particular preventive programs are developed, or it can also be a support tool at the service of teachers within the educational framework and parents within the bosom of the family. Sensitization and awareness-raising campaigns about the drug problem can remain available on the Internet as long as necessary, overcoming the time constraints presented by other media such as TV campaigns. Prevention programs with the format of web pages provide information, data, and actuation models and offer the following advantages over a traditional format (Lacoste et al., 1999):

1. The amount of information to transmit is unlimited, both in text format and with images.

2. The user can access the necessary data at any given moment, selecting those that are of interest.

3. Always available: no holiday days, nor nights, nor vacations.

4. It is a service which is "on hand" (i.e., readily available) to anyone interested, by home computer, which requires minimal effort.

5. It is an interactive medium that turns the final recipient of the message into a co-author, because he or she can actively collaborate by providing and/or modifying content.

6. It is the communication channel used by young people today, and it will be the form of communication of upcoming generations.

Browsing the Internet and feeling part of that virtual world, in which you can find everything under the sun, continues to be one of the greatest attractions of this communication technology. Searching for information or documentation is the most carried out activity by young people on the Internet (IJE91, 2003). Numerous studies (Journal of Youth, 1999 IJE91/2003, IESE, 2004) find a dual use and initiation of digital navigation; navigating is done in a playful sense of the word (searching for photos, music, videos, etc.), or in an occupational sense, for personal and employment training needs. This is very difficult to obtain without the speed and immediacy of the world of links and hypertextuality.

Since the inception of the Internet, professionals concerned about public health have used the online format to inform and sensitize the public about the consequences of drug consumption or other deviant behavior. However, only since a few years ago do we find initiatives designed to reach and capture the

attention of a young target audience by taking their audiovisual tendencies into account (Garcia del Castillo y Segura, 2009).

In this sense, we believe the productions that stand out meet the dual objectives of spreading knowledge based on scientific evidence and transmitting information as a prevention tool. Some examples are:

- The Spanish Association against Cancer publishes on its website an info-graphic video on the path of tobacco smoke and its effects along its path inside the body.

  http://www.todocancer.com/ESP/Informacion+Cancer/Imagenes/.

- "*Drogas y cerebro*", a page translated from its American original, offers dynamic and serious information on the neural mechanisms of drugs and their effects on the nervous system. www.drogasycerebro.com.

- The University de Utah, under the generic title of "helping people understand how genetics affects our lives," publishes on its website a wide collection of flash productions aimed at disseminating scientific knowledge.

  http://learn.genetics.utah.edu/units/addiction/drugs/mouse.cfm

- NIDA (National Institute for Drug Abuse) has developed several online games aimed at young adolescents, with the objective of providing information about drugs and their effects.

  http://teens.drugabuse.gov/sarasquest/sqgame.asp

2.1.2. Programs for the dynamization of social actors and resources.

Mediator training programs

This type of action consists of the training of mediators and leaders in the skills needed to produce a transmission of values and attitudes seeking a snowball effect. The mediator acts as a catalyst for social change processes that are considered necessary for the achievement of preventive goals.

Generally, the task of the social mediator in community interventions is not to impart knowledge or direct the training process of participants, but rather to put them in a position to learn without becoming the protagonist of their learning. The mediator must be mindful of motivating, facilitating, and eliminating obstacles, clearly showing the ability of groups to solve problems, yet all without directing or offering solutions. In principle, there are a large number of social agents who can exercise the role of mediator: teachers, health

or social professionals, members of religious orders, volunteers, etc. Although there is no profile that ensures optimum performance by the mediator, it seems clear that in no case be must mediators be arrogant, manipulative or incoherent, paternalistic, inflexible or rigid, or biased; neither must they consider themselves essential, nor believe that they are a savior, nor maintain closed or circular discourse. By contrast, the social mediator must show maturity and personal balance, capacity for continuous analysis of reality, critical and creative ability, knowledge of the immediate environment, capacity for teamwork, ability to manage and plan social activities, capacity to relate to the community, capacity for dialogue and communication, some psycho-pedagogic training and ability to dynamize social, group and personal life.

In addition to these qualities (which can be conveyed in a natural and intuitive way in the proper realization of the mediator's task), it is advisable that mediators acquire training tailored to the peculiarities of social mediation, which will endow their work with an essential technical quality.

Community action groups

Community action groups are associations or nonprofit organizations formed to carry out projects of interest in the community. Often these types of social initiatives arise from the interest and motivation of a few, generally those affected by the problem to be resolved. Public interest in the group´s action and the spreading of their work permit others to join and collaborate in the effort.

An example of community action groups are the movements of mothers against drugs. They are present in a sizeable proportion of the international geography. Created to deal with a social problem, they offer advisory assistance and social support to people who are in similar situations and participating in preventive campaigns.

Other established and active groups, such as certain neighborhood associations, have taken among their objectives the fight against social scourges and also the prevention of drug dependencies. Accordingly, they have incorporated actions with preventive intentions into their repertoire of activities, which they carry out in their work environment.

Many of the non-profit entities (associations, foundations, etc.) whose objectives are social mobilization or community work could be included in this category. Plans and strategies to combat drug use commonly include objectives aimed at promoting social participation; to meet these objectives, organizations are provided with budgets to carry out preventive work. Thus, we find in the

current "European Union Drugs Action Plan for 2009-2012" objectives aimed at promoting citizenry participation. The fourth objective of the area of coordination reads: "Ensuring the participation of civil society in the policy against drugs".

The key to a community action group´s success is having the support of opinion leaders (politicians, presidents of community or professional organizations, media publishers, etc.). Also important are volunteers and supporters (especially professionals: sociologists, physicians, psychologists, social workers, the police, etc.), who, through their support, lend credibility to the community action group.

Staff training programs for the personnel of leisure venues.

Staff training programs for bar and disco personnel, also known as Responsible Beverage Service Programs, seek to train bartenders, waiters and other staff, including managers, in handling situations of tension and violence and the prevention of alcohol-related accidents. This type of action is not without difficulties and obstacles in its implementation; there is strong resistance on the part of owners and managers, whose cooperation is achieved only through the obligatory nature of the action. Another problem with this kind of program is the high turnover rates of staff. Maintaining an adequate level of training requires that a training structure be constantly maintained.

The results of the research that have examined the effectiveness of such programs are contradictory. Several authors found that the implementation of a training program for employees significantly reduced the number of traffic accidents associated with alcohol consumption (Holder and Wagenaar, 1994; Shults, 2001). However, in a review of 20 Responsible Beverage Service programs by Cochrane, Ker and Chinnock (2008) for the effectiveness of training interventions to promote moderate alcohol consumption and violence prevention, no reliable evidence on the effectiveness of these interventions was found. Given the disparity of the assessment results, a larger number of studies analyzing the level of effectiveness of training interventions are required.

2.1.3. Programs for leisure spaces

Alternative Leisure Programs

 Alternative Leisure Programs, also called, Leisure and Recreational Programs, have experienced strong growth over the last decade. Alternative Leisure Programs have been implemented In the United States for approximately a

quarter of a century (Hansen, 1992). In 1997, the program "Abierto hasta el Amanecer (Open until Dawn)" marked the start of such programs Spain. Since then the large and medium-sized municipalities have offered a menu of healthy leisure activities and have sought alternative uses for municipal facilities through more or less coordinated programs as an alternative to leisure based in bars and nightclubs. The primary objective of Alternative Leisure Programs is to provide a recreational, voluntary, attractive, educational and, drug-free space, that competes on schedule and interest with settings associated with drug use, especially the night in bars and night clubs.

As argued by Sánchez (2002), the scope of Alternative Leisure Programs is not limited to substituting one leisure venue with another that is free of alcohol and other drugs. Rather, these programs go further by offering the possibility to take action in favor of personal protective factors. Through the active participation of youth in the proposed activities, other objectives aimed at strengthening psychosocial protective factors are pursued; among which are the promotion of healthy lifestyles, construction of social networks and protective environments that are protective and incompatible with drug use, promotion of unfavorable attitudes towards drug use, and development of social skills such as self-esteem, assertiveness and communication skills.

In general terms, alternative leisure programs can be considered non-specific universal prevention programs and are aimed at a target group of 15 to 25 year-olds, although some programs may include younger ages. Alternative Leisure Programs carry out, outside the academic, work or family framework, countless activities, as they are generated based on the interests and the changing trends in the world of the adolescent. Among them are cultural activities (concerts, exhibitions, and courses), sports (tournaments, extreme sports, sports travel), in nature (mountaineering, hiking, animal observation) and solidarity-based initiatives (community assistance and recovery natural sites, etc.).

Despite the widespread implementation of alternative leisure programs, research on them is still scarce. Yet, municipal specialists and those in private organizations continue to design and implement them by relying on "good ideas" with nearly no guarantees of success based on scientific evidence. Rigorous studies on the effectiveness of these programs in reducing drug abuse are very limited, and in most cases the assessment is limited to the process, with indicators such as user satisfaction or rates of participation, retention and rate (Fernandez-Hermida and Secades, 2003).

Risk reduction programs

The nightlife scene has generated numerous interventions designed to reduce the likelihood of accidents associated with drug use. They are selective prevention interventions or programs aimed at target group that uses drugs for recreational purposes, especially on weekends. Therefore, the objective of risk reduction programs is to prevent or reduce. They are aimed at reducing the negative consequences of drug use for both the individual and the wider community without necessarily requiring abstinence. An example of these program types is the designated driver program, which is based on designating a driver to remain sober throughout the night; its acceptance has been high and its effectiveness demonstrated. The perspective of risk reduction has generated a style more accessible to young people who use drugs on the weekend. Messages are limited to advising on measures to prevent harm associated with the use of alcohol and other drugs. Messages specific to this approach are: avoid mixing drugs, drink plenty of water, and do not drink alcohol if you have taken other drugs.

Among the risk reduction interventions, *Pill testing* programs stand out. These low-threshold programs emerged as a preventive resource in response to increasing consumption of synthetic drugs and in particular MDMA (Ecstasy). Its target audience are recreational consumers aged 18 to 30. They are carried out in nightlife areas, especially nightclubs, concerts, festivals and raves. Interventions are intended to provide information and maintain an uncritical stance based on respect for different forms of leisure and recreation.

In 2002, the European Commission funded an evaluation study in three cities (Hannover, Amsterdam and Vienna) with 750 people in total that analyzed the following hypotheses:

1. Pill testing makes contact possible with drug users who would otherwise be unreachable

2. Warning messages are received with more credibility in the context of pill testing

3. Substance consumers are better informed

4. Pill testing facilitates the monitoring and observation of the market.

The first three hypotheses were confirmed, the fourth only in certain circumstances.

2.1.4. Coercive measures to reduce drug consumption and related harm.

Deterrent policies and amendments to the regulatory framework of alcohol, tobacco and other drugs have always been tools for public administration in an attempt to reduce drug consumption and related harm.

In the case of legal drugs, there is a set of measures that enjoy broad consensus and whose implementation is driven from the European Community policy. Standing out among these measures are:

Fiscal Policies

The tax pressure on alcohol and tobacco aims to increase the cost of the product and thereby hinder its accessibility. Although the consumption of products such as alcohol and tobacco is resistant to subtle variations in price, it eventually responds to the logic of the demand curve.

Their wide dissemination throughout the United States and countries in the European Union vouch for the efficacy of these policies. Although it is true that fiscal pressure registers big differences between countries; thus, there is still ample room to maneuver for those less demanding countries. It is fair to point out here that the widespread implementation of said measures is partly due to the fact that they generally do not produce social rejection. Moreover, these measures represent a succulent source of income to the public treasury.

There are various economic studies that establish an inversely proportional relationship between price and demand, thus validating this type of intervention (Chaloupka et al., 2001). In Spain, a high assessment of tax policies is maintained. Pascual (2002) holds that an increase of 10% in the price produces a reduction in consumption of around 7% on average (5% for beer, 7.5% for wine and 10% for liquor).

UNIT 3: OBJECTIVES AND STRUCTURE OF COMMUNITY LEVEL PREVENTION PROGRAMS

Previous chapters explained how programs that are very different in type, pursue very different objectives and aimed at preferably youth are grouped together under the label of community prevention programs; although subgroups of recipients differ greatly in their degree of vulnerability and drug use. The variability consists of the relationship of the target group with drug use and/or the presence of risk factors. Tobler (1986) analyzed 143 prevention programs aimed at adolescents and found that, taking into account the vulnerability criterion or presence of risk factors among the target population,

programs could be classified into two large groups: on the one hand those aimed at the general population and on the other those designed for at-risk youth. This classification agrees with the one that the Institute of Medicine (IOM 1994) would propose years later: those universal in nature and those selective in nature. This classification starts from the risk conditions presented by the target population and consequently establishes differences in the objectives to achieve.

Universal programs are those aimed at the youth population in general. They include interventions that seek to prevent or delay drug use. These types of programs are characterized by:

- Designed to reach the whole population, regardless of individual risk situations. Recipients are not selected.

- Targeting large groups of people.

- Designed to delay or prevent the abuse of psychoactive substances.

- The cost per person is usually lower than in the selective programs.

Leisure and Recreation Programs, consumption control measures, toughening and controlling accessibility, programs aimed at building and strengthening healthy social networks and interventions through the media, among others are all community preventive programs and/or interventions universal in nature.

These programs generally pursue the following objectives:

1. Offering healthy leisure alternatives.

2. Promoting and strengthening social institutions and facilitating contact between these and the population

3. Promoting social networks committed to the welfare of their community.

4. Creating stable structures through the provision of services to meet social needs.

5. Promoting social education.

Selective programs are aimed at special subgroups who are at special risk of drug use. At-risk groups can be established based on any of the biological,

psychological, social or environmental factors that have been characterized as risk factors. The characteristics of this type of program are:

– They are designed to delay or prevent the abuse of psychoactive substances.

– Participants share characteristics that cause them to belong to an at-risk group.

– The degree of personal risk or vulnerability of members of the risk group is generally not assessed, but said vulnerability is assumed based on belonging to the risk group.

– Knowledge of the specific risk factors allows the design of measures specifically targeted at these factors.

– Generally require more dedication and effort from participants than universal programs.

– Require specially trained personnel since they must work with at-risk families and communities and troubled youth who have multiple problem behavior.

– Per-person costs are higher.

Selective pill testing, training for "nightlife" personnel, best practices pacts with leisure venues and nightclubs, peer training or information sharing (lectures, printed materials, strengthening of health services, etc.) are all community preventive programs and/or interventions selective in nature.

These programs generally pursue the following objectives:

1. Reducing risk and damage.

2. Reaching and obtaining epidemiological information from hard-to-reach populations that show reluctance towards the standardized system.

3. Informing young substance users about harmful and undesired effects

4. Fostering a culture of intelligent leisure.

5. Promoting safety measures in entertainment venues through the services they provide and staff training.

Universal Programs and Interventions	Objectives	Context	Supports and Formats
Interventions through the media	- Sensitize public opinion - Promote a social attitude against drug use. - Report on the effects and consequences of drug use. - Report on care and treatment resources.	Mass media and new of communication and information technologies.	- Internet: websites, blogs, social networks.. - Television, radio and the press: announcements, interviews, reports, - Video games, SMS messages.
Programs aimed at creating and strengthening healthy social networks	- Strengthen the partnerships and collaborative participation. - Promote citizen involvement in the solution of social problems. - Create an awareness of a collective membership. - Promote social pressure against substance consumption. - Promote support and self-help groups.	Public spaces. The Media. Leisure venues. Public and Private Centers.	- Activities in neighborhoods, plazas, parks, public and private facilities. - Meetings, information and support talks and seminars - outdoor activities.
Leisure and recreation Programs	- Offer a recreational, voluntary, attractive, educational and, drug–free space, that competes on schedule and interest with settings associated with drug use, especially the night in bars and night clubs. - Offer activities where the economic factor is not an obstacle for young people.	Municipal centers, sports and cultural facilities public spaces in general. Private premises that agree to collaborate.	- Cultural and sports activities. - Nighttime public mobility.. - Availability of public spaces (library, sports centers…). - Cinema, theatre. - Scheduling courses. - Organization of tournaments.
Coercive measures through regulatory regulations	- Prevent access to the premises for the sale of alcohol to minors - –Limit the availability of alcohol and tobacco.. - Control schedules. - Ensure coexistence in leisure areas.. - Reduce accidents and incidents of violence related to the consumption of alcohol and drugs.	Leisure venues . Public highway. Shops (tobacco y alcohol). Roads. Macro events (concerts, parties)	- Toughening and controlling accessibility . - Regulations to control and limit the opening of bars. - Monitoring and enforcement (police controls)

Figure 5. Programs and Interventions Universal in Character.

Selective Programs and Interventions	Objectives	Context	Supports and Formats
Informational interventions (lectures, printed material)	Report on the adverse effects of drug use . Report on the regulations and sanctions arising from the possession and consumption of substances.	Leisure venues. Public highway Special events (concerts, parties). Places frequented by young people (high school, university, social centers…).	- Printed materials: brochures, postcards, three-page leaflets, pamphlets… - Magnetic media support: CDs, DVDs … - Points of information (usually associated with other activities and services
Pill Testing	Provide immediate information on the composition of substances. Raise awareness of the negative effects of drug use. Obtain information on substances and consumers.	Leisure venues. Macro events (concerts, parties)	Common techniques - Marquis Test - Chromatography
Training for "Nightlife" Personnel	Train personnel working in the nightlife scene to: - Prevent violent incidents and situations arising from alcohol and drugs. - Know how to react in situations of risk (accidents, overdose, violence …).	Pubs, bars, discos, concert grounds.	Courses, lectures, seminars.
Mediator training programs	- Facilitate the implementation of preventive programs. - Enable a snow ball preventive effect. - Establish preventive messages broadcast channels.	Leisure venues. Public highway. Special events (concerts, parties). Places frequented by young people (high school, university, social centers…).	Talks or counseling interviews. Distribution of preventive materials. Healthy leisure activities.

Figure 6. Programs and Interventions Selective in Character.

UNIT 4: EXAMPLES OF COMMUNITY LEVEL PREVENTION PROGRAMS

In Europe the implementation of prevention programs in recreational settings is taking place at an increasing rate. The prohibitionist model has given way to another model with greater integration in youth culture that presents prevention from an uncritical stance. It has been shown that preventive interventions totalitarian in nature, although they might be accepted by young non substance users, generate certain reluctance among young substance consumers, who constitute the real target group. An approach to the culture, aesthetics, language and other differentiating elements of young substance users facilitate youth acceptance of the intervention.

Alternative Leisure Programs

Abierto hasta el amanecer: **http://www.abiertohastaelamanecer.com/**

The best known and longest running Alternative Leisure program in Spain is "Abierto Hasta el Amanecer" (1997 to 2009). This is a dynamic program that is reviewed based on the experience of previous editions, the current results of social analysis and available resources. On the basis of these three dimensions a group of activities that pursue the following general objectives are planned:

– Promote among youth stable leisure and free time alternatives on weekend nights that are playful in nature, participatory and about relationships.

– Affect to the extent possible a reduction in the demand for and abuse of drugs among young people during the times of highest consumption by promoting positive and healthy lifestyles.

– Boost the use of resources and public spaces at the city`s disposal, suitably using them outside of normal operating hours, especially in areas farther from the city center.

– Involve the social fabric in the intervention to improve the living conditions of young people within their community.

– Provide a group of youth mediators with the necessary tools and instruments to intervene in their community as regards drug dependency

prevention matters, in this way developing an alternative for young people put into effect by young people themselves.

– Generate employment in the youth population to facilitate their social and labor integration.

In general, Alternative Leisure Programs suffer from not having evaluations of their effectiveness. Fernandez-Hermida and Secades (2002) conducted an evaluation of the "Abierto Hasta el Amanecer", applying a pre-test/post-test control group design in a sample of 330 youth of both sexes with a mean age of 18.9, of whom 176 participated in the program (experimental group) and 154 did not (control group). The results indicated that the intervention generally produced no preventive results. Only in tobacco consumption was it found that the control group consumed significantly more than the experimental group did after participating in the program. Other measures of alcohol and illegal drug consumption and risk perception of drug use showed no difference between both groups.

Risk Reduction Programs

Energy Control: *http://www.energycontrol.org/*

The association, Energy Control, has operated in Spain since July 1997. They describe themselves as a group of people concerned about the use of drugs in youth leisure spaces, and provide information in order to reduce the risks of drug consumption. Their interventions are focused on leisure spaces (disco nightclubs, festivals, concerts and bar districts) and are characterized by low demands of and integration with drug users. For this reason, they utilize collaborators who share ways of having fun and tastes with young people, the target population of preventive interventions.

Energy Control´s basic principles of action are:

- Uncritical stance on the consumption of drugs, recognizing the possibility of responsible drug use, and the right of users to have preventive information in order to make decisions about their health. As a group, they do not adopt a position in favor of or against drugs and understand drug use as a health issue, not a moral one.

- Approaching substance use from a preventive perspective of risk reduction.

- Information is considered as a valid guide for responsible use, providing signs to detect and prevent the adverse effects of substance consumption.

- Interventions are based on the participation of the target population.

Interventions are based on providing objective information about drugs that facilitates taking responsibility in the decision on whether or not to consume. For this, they use information materials (postage–free, comics, phone line, leaflets…) that adapt to the demands of people who go to these particular places of leisure. In them, suggestions are offered on detecting and avoiding the adverse effects of drugs, both in self consumption, and in that of others. Energy Control Group is well known for its pill testing service, which determines the composition of a drug within a few minutes. People who want can solicit the analysis of any substance, by going to the stand set up for this purpose at points frequented by young people (club parking lots, festival grounds, nightlife zones …). This service is particularly interesting and facilitates the ability to provide information in other formats, talks or written information to people who would otherwise not heed it. The waiting time for the analytical results is the ideal moment to devote to chatting about drugs and their effects.

Energy Control has the collaboration of professionals from bars and nightclubs (disc jockeys, party planners and other professionals) who are concerned about the growing presence of drugs on the night scene. The actions of Energy Control are aimed at young people who frequent club environments (e.g., techno, trance, house) irrespective of whether they consume substances.

SELF–ASSESSMENT EXERCISES

1. Classify the following programs as universal or selective interventions.

– Mediator training programs

– Leisure and free time programs

– Coercive measures through regulatory regulations

– Interventions through the media

– Training for "nightlife" personnel

– Informative interventions (lectures, printed material)

– Pill testing

– Programs aimed at creating and strengthening healthy social networks

Solution:

Universal programs	Selective programas
- Interventions through the media	- Informative interventions (lectures, printed material)
- Programs aimed at creating and strengthening healthy social networks	- Pill testing
- Leisure and free time programs	- Training for "nightlife" personnel
- Coercive measures through regulatory regulations	- Mediator training programs

2. Say whether the following statements about universal prevention programs are true or false.

1. They are designed to target particular groups of individuals at particular risk situations.

2. They are designed to reach large groups of people.

3. They are designed to delay or prevent the abuse of psychoactive substances..

4. Participants share characteristics that make them belong to a group at risk.

5. They aim to create stable structures through the provision of services to enable social needs

6. The cost per person is usually higher than in the selective programs.

7. They require in general less commitment and effort on behalf of the participants than selective programs.

8. They promote social networking committed to the welfare of their community.

Solution:

1: F, 2: T, 3: T, 4: F, 5: T; 6: F, 7: T, 8: T

3. Find out what drug prevention programs are carried out in your community and explain one of them in detail:

Example: Bilbao Gaua (Bilbao, Spain)

Bilbao Gaua is an alternative leisure proposal for weekend nights aimed at youngsters between the ages of 16 and 35 who want to participate in a different option on Friday and Saturday nights.

The program is aimed at youth from Bilbao. The activities offered are cultural and sporting, but there are some courses. The cultural activities are free and no pre-registration is required, you just have to show up at the scheduled time of the activity. Among them there are different types of dance (Caribbean, Latin, Lounge, tango, etc.), concerts, theater, cuisine (Japanese, Euskaldun, Italian, etc.), and workshops (percussion, leather, DJ, infusions, etc.), hair salon, relaxation techniques, etc.

Bilbao Gaua has at its disposal facilities in different parts of the city to facilitate the access of all young people to these programs:

– District 1 - DEUSTO-SAN IGNACIO

– District 7 – REKALDE

– District 8 – ZORROZA

– BILBO-ROCK (La Merced, 1)

Bilbao Gaua has an extensive list of partners such as associations, federations, schools, gyms, studios, etc. All information about the program can be found on the program´s website:

http://www.bilbao.net/bilbaoGaua/home.jsp?idioma=c&tema=&subtema=

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Selection of links

- Delegación del Gobierno para el Plan Nacional sobre Drogas (Spain)

    http://www.pnsd.msc.es/Categoria2/publica/otras.htm

    Webpage dedicated to publications classified by areas. It contains interesting publications about community prevention.

- Elisad

    http://www.addictionsinfo.eu/

    Online catalog of specialized web pages from 35 countries. By means of an open search or an advanced search composed of 13 subject and context categories, both descriptions of content and related information can be obtained.

- INID (Drug Research Institute*) http://inid.umh.es/*

- Irefrea

  http://www.irefrea.org/

  Network on professionals founded in 1988, based in different countries, concerned with prevention and research on problems of drugs and other types in childhood and adolescence.

- European Monitoring Centre for Drugs and Drug Addiction

  http://www.emcdda.europa.eu/html.cfm/index44131EN.html

- *Risk reduction*

  - Techno Plus. *http://www.technoplus.org/ (France)*

  - Eve and rave   http://www.eve-rave.ch/home

  - Energy Control http://www.energycontrol.org/ (Spain)

  - MDA Basecamp http://mdabasecamp.com/ (Austria)

  - Rave Shuttle http://www.raveshuttle.de/ (Germany)

MODULE IV:

School-based Drug

Use Prevention

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Module IV:
School–based Drug Use Prevention

Unit 1. The role of risk and protective factors in drug use prevention programs.
1.1. Theoretical frame: individual, interpersonal and societal risk and protective factors.
1.2. Explicative model of drug use.
1.3. The role and importance of the risk and protective factors: and of the explicative models of drug use.

Unit 2. The development of school–based drug use prevention programs.
2.1. Classification of school-based drug use prevention programs.
2.2. Classification of programs according to the methodology of application.

Unit 3. Core components of efficacious school–based drug use prevention programs.
3.1. Information transmission.
3.2. Social skills training.
3.3. Training in personal competencies and skills.
3.4. Making an impact beyond the implementation of a school-based prevention program.

Unit 4. Evaluation of school–based drug use programs.
4.1. Evaluation within the framework of school–based drug use prevention.
4.2. What the evidence tells us about the efficacy of school-based prevention.

SCHOOL–BASED DRUG USE PREVENTION

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SUMMARY

There are multiple contexts in which prevention can be carried out (family, school, community, labor); however, the school is where a considerable number of preventive programs have been developed with greater intensity. (Cano and Berjano, 1988; Eiser and Eiser, 1988; Escamez, 1990; García del Castillo and López, 1988; García del Castillo, 1991).

The role of the school as an appropriate medium to develop and promote preventive actions against drug use has been repeatedly highlighted. An example is the state of the problem that the European Monitoring Centre for Addiction provides us in its 2005 Annual Report, in which the following stands out: "In all Member States, schools are considered the most important setting for universal prevention, and there has been a noticeable increase in the emphasis placed on school–based prevention in national strategies and in the structured implementation of this approach." (pp.30).

Despite the limitation that working solely with adolescents entails, there are important grounds that justify this inclination. Among which, we can highlight the following:

- From an evolutionary standpoint, it is essential that attitudes and habits (lifestyles) be formed and educated from the earliest age, and the school has the means and resources to carry out this formation. In this sense, the educational system provides for the comprehensive education of the person through the development of skills, values and attitudes. In turn, this enables the ability to provide students with the adequate tools to make decisions about their health.

- Similarly, the school context helps ensures us continuous and long-term access to virtually one hundred percent of adolescents, (García del Castillo and López, 1988; García del Castillo, 1991), which allows

developing preventive actions that are articulated and maintained over time.

- In turn, the school context provides greater opportunity to be able to relay messages consistent with the maintenance of health throughout the school as opposed to ad hoc interventions. In other words, given their proximity and influence with students, teachers and other members of the education community can become optimal prevention agents.

- In addition, apart from their greater availability and ease of access, teachers are specialists in educational technology and classroom management, especially disruptive behavior.

- And finally, the school context facilitates not only the monitoring of prevention programs, but also their evaluation and experimentation (Nebot, 1988).

- In this module, the most relevant aspects related to the development of school-based drug prevention programs are presented in general and succinct terms. To do this, the risk and protection factors affecting school-based programs will be presented in the first unit. In the second unit, the evolution experienced by school-based programs from traditional models based on the transmission of information to current models is summarized. The third unit will set out the core elements that an effective program should contain to prevent drug use in the school setting. And finally, the fourth unit will address the most significant issues related to the evaluation of school-based prevention programs.

UNIT 1: THE ROLE OF RISK AND PROTECTIVE FACTORS IN DRUG USE PREVENTION PROGRAMS.

1.1. Theoretical Frame: Individual, Interpersonal and Societal Risk and Protective Factors

1.1.1. Introduction: General Framework

Over the last twenty years or so, research has tried to determine how substance use begins and how it progresses. Understanding of the different influences for substance use requires looking at several systems in a person's life including the individuals and their family, their community and society as a whole. We need to understand and assess the risk and protective factors in each field.

Simply stated, risk factors increase an individual's likelihood of substance use and abuse while protective factors reduce the risk.

It is important to emphasize that when looking at the diagram above or when assessing a student's situation, the risk factors do not necessarily cause substance use/abuse, but rather they put the person more at risk for developing such a problem. Conversely, if many protective factors are present, then behaviours such as substance abuse are less likely under these conditions.

1.1.2. Individual Risk and Protective Factors

In looking at the individual, risk factors might include:

1. Early age of first use.
2. Low self-esteem.
3. Social skill deficit.
4. Genetic factors.

Whereas protective factors could include:

1. Personal and social competence.
2. Optimism about the future.
3. Good problem-solving skills.
4. Involvement in pro-social activities.

Obviously not an exhaustive list, but it does begin to paint the picture that a person may have many risk factors and still not have substance abuse problems due to protective factors in their life. One other key element for an individual is resilience. Resilience is the ability to cope with adversity in spite of a situation that one might not be able to change (e.g., living with an alcoholic parent). Some children are able to survive impossible odds and thrive, their individual strengths and assets are dynamic and they adapt and go on to develop in positive ways.

1.1.3. Interpersonal Risk and Protective Factors

The single best predictor of a youth becoming dependent on substances is having family members who are themselves substance abusers or where there is a family history of substance abuse. General parenting abilities and family functioning are also important influences. Families with disruptions in "family

management" such as disorganization or chaos, poorly defined rules and poor communication patterns can lead to behavioural problems. The structure or make-up of a family (i.e., two parents or single parent lead) can have an effect on the stressors (risk) that impact family members, as can the strength (protective) of the extended family network and their involvement in a youth's life.

Other risk factors are:

- experiences of abuse (physical, sexual and emotional),

- perceived prevalence of use

- substance use by friends.

Attaching to a peer group that uses drugs and have a tolerance for substance use is another strong predictor of adolescent drug use.

1.1.4. Community/Societal Risk and Protective Factors

- exposure to drug selling or use in the community,

- perception of high use in their community as the "norm",

- lack of law enforcement and

- economic disadvantage

There are all risk factors at the community level and need to be considered when working with a youth or when developing policies. Risk and protective factors can affect youth at different stages of their lives. At each stage, risks occur that can be changed through prevention intervention. Early childhood risks, such as aggressive behaviour, can be changed or prevented with family, school, and community interventions that focus on helping children develop appropriate, positive behaviours. If not addressed, negative behaviours can lead to more risks, such as academic failure and social difficulties, which put children at further risk for later drug abuse. Therefore, an important goal of prevention is to change the balance between risk and protective factors so that protective factors outweigh risk factors.

1.1.5. What are the highest risk periods for drug abuse among youth?

Research has shown that the key risk periods for drug abuse are during major transitions in a person's life. The first big transition for children is when

they leave the security of the family and enter school. Later, when they advance from elementary school, they often experience new academic and social situations, such as learning to get along with a wider group of peers. It is at this stage-early adolescence-that children are likely to encounter drugs for the first time.

When they enter high school, adolescents face additional social, emotional, and educational challenges. At the same time, they may be exposed to greater availability of illegal substances and alcohol, substance abusers, and social activities involving substance use. These challenges can increase the risk that they will abuse alcohol, tobacco, and other substances. When young adults leave home for college or work and are on their own for the first time, their risk for drug and alcohol abuse is very high.

1.2. Explicative Models of Drug Use

The most important models/explicative theories are the ones developed by Clayton, Hawkins and Patterson. Here below we'll shortly explain the risk and protective factors correlate with these 3 theories:

1. Conforming to Clayton (1992) there are five general principles important in risk factors: using.

- The risk factors (individual characteristics or ambiental conditions) could be involved or not in a concrete case. Practical, when we have a risk factor the probability for drug use are increased.

- The one risk factor influence is not an assurance for drug use, but the opposite too, the lack of this, is not an assurance that it will not be drug use. This is available for protective factors too. Usually the drug abuse is a result of a multiple factors action.

- The number of risk factors involved is directly related with drug use probability, even this aditive effect can be reduced depending on the nature, content and the number of related risk factors involved.

- Mostly of the risk and protective factors have multiple measurable dimensions and each of those could influence in an independet and general manner the drug abuse.

- The direct interventions are possible only for specific risk factors detected and could have like result the reducing or total elimination of

5

them, hereby decreasing the probability of drug use. There are other risk factors that the direct intervention is not possible for, the main objective remaining only the attenuation of its influence, so the maximum decreasing of drug use probability.

2. Hawkins (1992) Risk factors clasification:

- Genetically – children of the drug and alcohool users

- Constitutionally – early drug use (before 15 years), the pain, or chronic deseases, physiologic factors

- Psychologically – mental health problems, physiologic, sexual or emotional abuse

- Socio-culturally – drug use in family, positive atitudes regarding drug use, the divorce or parents separation, difficulties in family managemet, low expectations from parents, friends who are drug users, early anti-social behaviour, the lack of social rules, low scholar performances, scholar abortion, scholar abandon, dificulties to pass to superior school classes, permissive community rules and laws regarding drug use, lack of social relationships, social and economic poverty, drug availability (including alcohol and nicotine).

3. Patterson's model are indicating the following types of risk factors:

- Social/related with community risk factors:

  - *Socioeconomic deprivation* – for those children who are living in dysfunctional social environments and in groups related with criminal activities the probability to develop antisocial behaviours and or drug use problems.

  - *The lack of childhood attachment and community disarray* – many of drug related problems appear in communities or neighbourhoods where people has an low community attachment, where there is vandalism or criminality behaviours in public places.

  - *Transitions and mobilities* - ex – in transition stages from the primary to secondary school or to gymnasium, it could happend a significant increase of drug use or of other behavioural problems. Furthermore the communities characterised through

increase mobility seems to be more related with an increase risk of drug use or criminal behaviour.

- *Drug availability*. If the drugs are available in community, the risk of use is increased. There is the same situation regarding the alcohol availability..

- Family risk factors:

  - *Family history of alcoholism* – a premise for an early alcohool use

  - *Familial control problems* – Inadequate strategies during of family history, including lack of behavioural expectations, the abusive punishment, the parents failure in controlling their children..

  - *Parents who actually are drug or alcohol users and actually have positive atitudes regarding the substances use*. – In all these cases there is an increase probability for the substance use of their children, especially in adolescence..

- Scholar risk factors:

  - *An early antisocial behaviour* – the children who are agressive in their childhood games have an increase risk of substance abuse. When this early agressive behaviour is related with isolation or abandonment, the hiperactivity are increasing the risk of teenage problems.

  - *The scholar failure*. Mostly if this are beginning in the last years of the primary school the risk of drug use and abuse and of delinquent behaviour are increasing.

- Individual risk factors:

  - *Rebelion/allienation*. The child who feels that he's no part of the society or who doesn't accept the social rules and doesn't believe in success or responsibility has an stronger risk of drug use..

  - *Antisocial behaviour in the early adolescence*. This risk factor includes deviant behaviour in school, scholar abandonment, involvment in phisically conflicts with other children and the development of delinquent behaviour..

- *Friends who are drug users.* In case of the children who were associated with drug users equals there is an increase probability to became drug users too

- *Positive atitudes regarding the drug use.* These appear in all the risk situation, involved in all the stages, especilly when is about friends or families who are already drug users.

1.3. The role and importance of the risk and protective factors: and of the explicative models of drug use.

1.3.1. Principles:

The hours and budget available for classroom-based universal programs are limited; therefore, prevention efforts must be efficient and effective in a number of areas. Generally speaking, classroom-based prevention programs can be expected to impart understanding of the materials and skills taught and reinforce anti-drug attitudes by accurately presenting substances, their risks, and sources of pro-drug influences in a way that consults each student's sense of reality. Such programs should increase students' ability to utilize what they have learned to make personal, informed decisions regarding their use of substances. Further, classroom-based programs should improve skills that will protect youths. Programs for adolescents should be mindful of behaviors, marking the transition to adulthood including gaining peer acceptance, emulating adult behaviors, and the seeking of additional sensations and life experiences.

Taking these factors into account, classroom-based programs can help youths develop skills to accurately understand and communicate on the subject of addiction and drug use. This would include the ability to spot the negative affects drugs have on others, thereby potentially strengthening abstinence decisions; improving the ability to accurately recognize and resist pro-drug messages from many societal sources; and encouraging alternative activities based on personal interests – especially those appropriate in the school setting.

1.3.2. What does this mean for teachers and schools?

The social environment of the school is a key factor influencing the healthy development of young people. Research has indicated that students who feel attached to their schools are less likely to engage in anti-social behaviour or drug use practices. On the other hand a feeling of alienation or not belonging can lead to behaviour problems, substance use and anti-social activities.

There is a current focus on schools as communities rather than just institutions. Community in this context is an expression of school culture. School culture is different from school climate. School culture is based on a set of issues and relationships and each school's culture is created by the combination of people at a given time. It is greater than the sum of individual contributions and is a process. A positive school culture is linked to improved academic and behavioural outcomes. Fewer problems are expected because socially cohesive and democratic school cultures instil to students a sense of school membership where they experience feelings of communal acceptance and belonging and attachment to school life. Specifically, environmental conditions shape individual student feelings and attitudes, which in turn exert a direct impact on their academic performance, mental health, and behavioural tendencies.

The quality of the students' relationships with the school, principal, teachers, school rules and their peers influences their sense of belonging. The protective effect of feelings of attachment is provided by:

- Warm relationships of mutual respect.

- Teachers who recognize that children contribute to finding solutions which balance justice, care and truthfulness and conduct their classes based on this philosophy.

- Teachers who model positive interpersonal behaviour.

- Teacher styles that stimulate active student participation.

- Classes that promote democratic attitudes and values.

- Classes that foster the normative value of helping.

1.3.3. What can schools do?

Schools are encouraged to introduce or strengthen existing programs that provide students and teachers with opportunities to meet and interact with one another on an informal basis. They are also encouraged to provide students with access to resources and activities that hold potential for promoting positive peer bonding (e.g., school buddies programs, extra-curricular activities, or school clubs). Schools should strengthen policies and programs that promote high academic expectations for their students.

As well, strengthening learning goals that place more emphasis on mastery and understanding of subject matter and less emphasis on competition and relative ability in the evaluation of student performance can produce positive outcomes.

To address negative behavioral norms, schools should consider introducing anti-bullying programs and increase their use of hall monitors. Anti-bullying programs may help to address the high levels of reported verbal abuse. Increased use of hall monitors can be an effective tool in preventing or reducing truancy, drug use on school premises and verbal abuse. Other problems that were mentioned by students, such as fighting, theft of personal property, and vandalism might also be addressed in this way.

Schools can develop a "School as Communities" framework that is built on the following qualities and principles: belonging, equality, fairness, respect, caring, cooperation, trust, recognition, and shared beliefs and value.

1.3.4. What can teachers do?

The quality of the students' relationships with school includes their relationship with teachers because a positive relationship with at least one adult who is not the parent builds on protective factors. Teachers can also contribute to the framework that increases student's sense of community and attachment by including the qualities and principles in the environment of their classroom. Teachers can build on the school environment where the protective effects of feelings of attachment are present.

For example:

- Set clear classroom boundaries with clear rules and consequences.
- Encourage a constructive use of time.
- Foster an environment that encourages a commitment to learning.
- Encourage reading for pleasure.
- Praise student's achievements and accomplishments.
- Acknowledge of the successes and abilities.
- Model a sense of optimism and a positive view of learning.
- Keep the channels of communication open.

- Be a good listener.

- Keep an open mind.

- Ask students for opinions.

- Encourage participation in extra curricular activities.

To the best of their abilities, teachers and schools should try to create a sense of community that is caring and supportive. Schools and classrooms with a positive culture, with high expectations from teachers, administration and other school staff, with clear standards / rules for behavior and consistent enforcement practices tend to decrease risk factors and increase protective factors for their students.

1.3.5. What teachers can do to make prevention strategies more comprehensive

A variety of strategies to be considered in developing a comprehensive prevention strategy:

- School curricula and classroom management techniques (focused on protective factors), as well as other school climate activities.

- Family-based activities to increase positive parent–child communication.

- Community interventions, including task forces and media campaigns to change the larger environmental influences relative to alcohol, tobacco and other drugs.

These strategies include involving the family in prevention efforts and reinforcing material in the home, as well as affecting and involving the community. There are two general steps teachers can take:

1) Implement the most promising comprehensive prevention strategies available and infuse important concepts and skills across subject areas and school settings.

2) Extend classroom concepts and activities to the home and community.

Life skills Training session is a highly rated, recommended and researched substance abuse prevention program today. Rather than just teaching information about a drug this program teaches students to develop skills so they are less likely to engage in high-risk behaviors. Life Skills is designed for elementary and junior high school students and has been effective with white

middle-class and ethnic-minority students in rural, suburban, and inner-city populations. Life Skills Training consists of three major components: Drug Resistance Skills, Personal Self-Management Skills, and General Social Skills. Drug Resistance Skills enable young people to recognize and challenge misconceptions about tobacco, alcohol, and other drug use. By increasing perception of person risk and life skills training students learn alcohol, tobacco, and drug abuse information and resistance skills to deal with peer and media pressure through coaching and practice. Personal Self-Management Skills teach students how to examine their self-image and its effects on behavior. Students learn to set goals, make decisions, analyze problems and consider the consequences of each solution before making a decision. They also learn to look at challenges in a positive light. General Social Skills teach students to communicate effectively and avoid misunderstandings. Students also learn to initiate conversations and handle social requests. Life Skills Training teaches students that they have a choice other then being aggressive or passive.

1.3.6. Implement the most promising prevention strategy available and reinforce it across the school environment – good practice

The field of drug abuse prevention is based on extensive research. It is not advisable for teachers and other school personnel to try to develop prevention curricula without extensive study and training. Anyone who develops a prevention curriculum should have a thorough understanding of the critical ingredients of effective prevention programming.

Drug abuse school prevention programs which is based on normative expectance theory and social resistance theory. Programs based on normative expectancy theory promote anti–drug use norms. They teach students that most of the people they admire, including their peers, do not use drugs and do not think drug use is "cool." They accomplish this by giving students accurate information about how many students use alcohol, tobacco or other drugs, emphasizing statistics that show that drug use is rare. These programs provide teachers with training, so that they feel comfortable directing discussions about the acceptability of drug use, and eliciting information from students to show that most young people do not approve of drug use. They also use a variety of demonstration techniques, such as having students move to one side of the room or the other depending on whether they agree or disagree to various opinion statements about drugs, to show in a very concrete and public way

where they "stand" on an issue. This serves to show young people that drug use is not approved of by most of their peers.

Drug abuse school prevention programs, which are based on effectively resist social influences by media and peers. This is done in a concrete, systematic way. Students learn about the kinds of influences and pressures they are likely to be exposed to, including media influences, and the subtle messages in advertising. They also learn skills for resisting peer pressure. In particular, they learn how to question messages they hear and say no to peers without losing friends. To do this effectively they learn explicit, step-by-step instructions and are given ample time to develop and practice this new skill inside and outside of class.

Drug abuse school prevention programs which is based on normative education and social resistance skills training/ social skills.

Research with middle school students suggests that these curricula can enhance program effects. Curricula should provide students with effective training in:

- Decision-making.

- Problem solving.

- Stress management.

- Social skills training in communication and assertiveness can enhance program effects.

Normative education, social resistance skills training and personal and social skills training are best accomplished using interactive teaching techniques such as:

- Brainstorming.

- Discussions.

- Cooperative learning.

- Games, role plays.

- Behavioral rehearsal (Dusenbury & Falco, 1995).

It is important that teachers receive training and are comfortable using these techniques and implementing the lessons as program developers intended.

The result of some studies indicated that prevention policies and programs should focus on both the reduction of risk factors and the promotion of positive influences if the reduction in substance use, crime, and violence among adolescents or the improvement of academic performance are intended outcomes.

UNIT 2: THE DEVELOPMENT OF SCHOOL–BASED PROGRAMS FOR PREVENTING DRUG USE

Over the past three decades, various types of universal prevention programs have developed in school settings. These programs have evolved from more traditional models, which are based on the transmission of information and affective approaches, into the most current models.

These current models produce their effects by affecting the risk and protective factors associated with drug use; this is done by combining the best didactics and pedagogy of knowledge transmission with cognitive-behavioral techniques based on the development of personal and social skills.

The main objective of the current models is to train adolescents to deal with conflict and pressure situations, make decisions and clarify goals. Furthermore, they promote attitudes that are critical toward drug use and favorable to the maintenance of health. In short, these are the personal competencies that act as protective factors for health (Espada, Rosa, and Mendez, 2003).

2.1. Classification of school–based prevention programs according content domain.

Using as reference the content they include, school–based prevention programs can be classified into:

- *Traditional approaches*.
    - Programs based on the transmission of information.
    - Programs based on affective education.
    - Programs based on the promotion of alternative activities.
- *Programs based on the Psychosocial Influence Model*.
    - Resistance skills programs.
    - Programs for the improvement of competencies.

- *Multicomponent Programs.*

- *Evidence-based Programs.*

Below the most defining characteristics of each of the school–based preventive approaches developed to date are reviewed through an analysis of the advantages and limitations that evaluative research of these interventions yield.

2.1.1. Programs based on the transmission of information.

Before the 1960s, the phenomenon of drug use was already beginning to generate concern among governments and groups of health professionals. Nevertheless, the main government policies and measures carried out were based on legislative approaches aimed at reducing the drug supply; such measures did not achieve great results.

In the late sixties and coinciding with the commonly called *drug epidemic*, earlier repressive measures began to be replaced by programs based on the transmission of information and those resorting to fear.

The first programs developed assumed that the use of drug occurred because of a lack of information about the risks associated with their consumption. The basic premise from which they started was that if people have adequate knowledge about drugs then they will not have attitudes or intentions to consume them; therefore, they will make rational decisions leading them to not use drugs (Becoña, 2002; Goodstadt, 1978). For this reason, these programs based their plan of action on providing information about negative consequences, drug use patterns, and the pharmacology and process of addiction.

The strategies employed in these models were limited to talks given by experts, police officers and ex–drug addicts. On numerous occasions, they appealed to moralistic content and resorted to fear in the process.

Various studies show that these programs, when implemented as the only preventive strategy, have shown some impact on the level of information and very poor results in attitudinal change; they even indicate a possible counter–preventive effect. Because by providing information inappropriate for certain ages, target groups do not perceive messages in the same way that they are transmitted and curiosity regarding the possible pleasurable effects of drugs is piqued.

Furthermore, although many adolescents associate drug use with the risks that it implies and generate sophisticated assessments of these risks, the most knowledgeable or well-adjusted adolescents are those least likely to have experienced the negative effects of drugs. Likewise, they are those least likely to minimize the importance of these negative effects (Gamma, Jerome, Liechti and Sumnall, 2005).

2.1.2. Programs based on Affective Education.

The programs framed under this model focus on promoting the personal and social growth of the individual. Without going so far as to conduct a bona fide training in skills, they seek to promote self-esteem and personal growth, values clarification and decision-making through class activities and games.

Although this type of program covers many of the factors included in present-day interventions, the strategies they use to do so have no effect whatsoever on drug consumption behavior. In fact, there is controversy regarding the mediating variables of these strategies.

Two possible arguments have been proposed to explain the lack of efficacy of affective interventions. First, such approaches do not consider other psychosocial factors that influence drug use. The second argument refers to the methodology employed (i.e., activities and games), which lacks a prior assessment of its efficacy and does not emphasize the use of empirically validated behavior modification techniques (Botvin and Botvin, 1992).

2.1.3. Alternative Activities Programs.

This approach, originating in youth recreation centers, started from the following premise: the existence of activities which are as appealing as drug use would replace the space occupied by drugs. Therefore, its work focused on providing youth with recreational activities (e.g., sports, volunteering, and environmental) that offered opportunities for challenge, sensation seeking and personal development as healthy alternatives to drug use.

It has been shown that although this approach produces beneficial effects in other areas, it does not have an impact on substance consumption behavior.

Previous approaches have been based more on intuitive fundamentals than theoretical ones; and perhaps this is the main cause that explains the absence in the efficacy of their results. However, in recent decades, a considerable increase in knowledge about drug use has been achieved, which has resulted in the

development of approaches based on empirical results and recognized theoretical models of human behavior.

2.1.4. Programs based on the Social Influence Model

Starting from the 70s and 80s, the social environment becomes vitally important. This is due to the development of studies from social psychology that emerged from the model of psychological inoculation (Evans et al., 1978) social learning (Bandura, 1986), problem behavior theory (Jessor and Jessor, 1977) and/or persuasive communication theories (McGuire, 1961). In this context, it is assumed that the consumption of drugs, like any other behavior, arises in a particular social environment where the presence or absence of certain parameters facilitates its occurrence.

From this point, the focus in prevention programs centers on three risk factors: environment, personality and behavior; programs based on the Social Influence Model thus emerged. Under this epigraph are contained programs that carry out resistance skills training and those based on improving personal skills.

2.1.4.1. Resistance skills programs

This approach postulates that drug use is due to direct or indirect social influences exerted by the media or the peer group (e.g., modeling, persuasive advertising, peer pressure from the group of friends, etc.). It argues that sometimes adolescents do not have certain skills to cope with social situations that promote the use of psychoactive substances.

Using various techniques (e.g., instructions, modeling, role-playing, etc.), they aim to make subjects aware of the situations in which they may find themselves under pressure to use drugs and then try to train them in specific refusal-resistance skills to deal with these situations. Apart from these types of skills, they usually include the main persuasion techniques used in advertising and by the media, along with modules that correct the perception that the majority of people use drugs.

Although these programs also consider the influence of family and the media (e.g., they include activities that critically analyze the strategies used by advertising which promote consumption), they are mainly focused on the influence of the peer group. Therefore, the objective of school-based programs that form part of this approach is that subjects learn to avoid high risk situations

and/or acquire the knowledge, confidence and skills to deal with social pressure.

Over the past two decades, numerous studies have been conducted to assess the efficacy of this approach. Broadly speaking, research supports a small but positive effect of programs based on resistance skills training against the consumption of tobacco, alcohol and marijuana. However, data from studies evaluating the long-term effects of such programs indicate that these effects gradually decrease over time (Flay et al, 1989; Murray, Piere, Luepker and Pallonen, 1989).

2.1.4.2. Skills improvement programs

Skills improvement programs consider drug use to be a socially learned behavior, resulting from the interaction of multiple factors and produced by deficiencies in several areas. Therefore, the main aim pursued by these programs is the development of the skills necessary to prevent the use of substances as compensation for said deficiencies or as a coping strategy.

This approach, in addition to including components of the previous approach, places emphasis on the acquisition of general skills (personal and social) that have a broader application than the specific application of refusing drug offers. Nevertheless, the personal and social skills training focuses specifically on drug use, although the repertoire of acquired skills is useful in many life situations.

With regard to the programs that have been specifically developed to prevent drug use, some studies have found effects on drug use behaviors (Coggans, Cheyne and McKellar 2003; Epstein, Botvin, Diaz, Toth and Schinke, 1995; Faggiano et al., 2008; Pentz, et al., 1989), provided there is a high fidelity in the implementation of protocols and the content of activities are focused specifically on drug use.

2.1.5. Multi-component programs

A large majority of school-based prevention programs include more than one type of intervention. In this sense, the commonly called multi-component programs usually combine curricular interventions in schools with more extensive environmental changes, such as parent training, media campaigns and/or broad community interventions.

Multi-component programs aimed at students likely have higher efficacy than those focusing exclusively on the school, especially when they combine school-level interventions with family interventions (Kumpfer and Alvarado 2003; Perry, et al., 1998; Shepard and Carlson 2003), community interventions (Cuipers, 2002; Flay, 2000; Perry, et al., 1998), interventions on the overall climate of the school (Flay, 2000) and/or interventions on the media (Flynn et al., 1992).

However, very few efforts have been made to evaluate which features are responsible for the efficacy of these multi-component programs (Allott, Parson and Leonard, 1999; Canning, Millward, Raj and Warm, 2004; Flay 2000). In addition, due to their complexity, such programs are more difficult to implement and evaluate than those focused on a single area. Therefore, they run the risk of being diffused and difficult to sustain over the long term, since they require the cooperation of a large number of subjects and/or groups.

Similarly, the results must be treated with caution, since the studies from which they are drawn have several methodological problems. When estimating the efficacy separately for each of the added features, differential effects are not found and/or they are shown to be less efficacious than school-based programs.

2.1.6. Programs based on scientific evidence

Currently, school-based prevention programs are characterized by being based on evidence provided by scientific data, building on the learning of various types of skills. All the efforts invested in prevention focus on the evaluation of programs, strategies and preventive activities by means of increasingly rigorous research on the forms of intervention. Evaluations are conducted in order to be able to discern what works from what does not, and consequently, that which is appropriate to implement and that which is not for our preventive purposes.

Thus, the majority of up-to-date programs focus on generating significant changes in two variables types: mediating variables (e.g., risk and protection factors), which help explain drug use, and drug-use outcome variables (e.g., delaying the start of drug use and reducing its level).

Table 1 illustrates a summary of the chronological order that the development of prevention programs has followed.

Years	Dominant Preventive Programs

1960–70	Knowledge-based Based on providing information about drug use and its effects.
1970–80	Affective Programs Nonspecific Programs (e.g., personal development)
1980–90	Programs based on the Social Influence Model – Resistance skills programs – Programs for the improvement of competencies
At Present	Programs based on scientific evidence

Adapted and expanded from Gorman (1996); Becoña (2002)

Table 1. Chronological Evolution of Preventive Programs

2.2. Classification of school–based prevention programs according to the method of application.

Just as the content domain distinguishes one type of program from another, the way in which they are applied also differentiates them from each other. Tobler et al., (Tobler, 1986; Tobler, Lessard, Marshall, Ochshorn, and Roona, 1999; Tobler and Straton, 1997; Tobler *et al.*, 2000) classified programs into two groups depending on the level of interaction they provide in class:

– *Non-interactive programs*: programs that make a theoretical presentation of information with limited interaction or learning methodologies that include interaction between teacher and student, but not among students.

– *Interactive programs:* programs whose methodological structure is based on group techniques (role-playing, active modeling, debate and discussion groups) that encourage peer interaction or structures that promote maximum interaction among students.

Studies suggest that the most effective teaching approaches are *interactive* (Cuijpers, 2002; Flay, 2000; Maiwald and Reese, 2000; McBride, Farringdon, Midford and Phillips, 2001; Shin, 2001; Shope, Elliot, Raghunathan and Waller, 2001; Skara and Sussman, 2003; Tobler *et al.,* 2000). Since interactive programs provide

opportunities for contact, communication, and the exchange of ideas among participants, they stimulate the learning of drug refusal skills. Thus, receiving feedback and constructive criticism in an atmosphere of trust allow students to practice the refusal skills that they have just learned.

For example, Tobler et al., (Tobler, 1986; Tobler and Straton, 1997; Tobler et al., 1999; 2000) through a series of meta-analysis studies on school-based programs, found the following for interactive programs: an effect size of 0.15 in relation to tobacco use (based on 105 values); an effect size of 0.13 for alcohol use (calculated based on 66 values) and for cannabis consumption (based on 37 values). That is, the programs that reduced drug use employed interactive methods, while other programs used non-interactive methods.

Similarly, the results of these studies show that programs that emphasize *knowledge and affective* content tend to utilize non-interactive methods. On the other hand, programs that stress *knowledge* with *refusal skills* and *knowledge* along with *refusal and generic skills* tend to utilize interactive methods.

In conclusion, the results of these meta-analysis studies indicate that interactive prevention programs and social influence prevention programs outperform non-interactive programs that focus on knowledge alone. Likewise, the existence of a good cost-effectiveness relationship of such projects carried out in the school has been proven (Caulkins, Pacula, Paddock and Chiesa, 2004).

UNIT 3: CORE COMPONENTS OF EFFICACIOUS SCHOOL-BASED PROGRAMS FOR THE PREVENTION OF DRUG USE

A preventive program is a set of systematized and preplanned actions specifically aimed at preventing the emergence of the problem to which it is addressed (Escamez, 1990). In the case of drug dependencies, the main objective of a program is to prevent, reduce or delay the onset and associated consequences of the abuse and consumption behavior of various drugs.

However, and depending on the target group, the previous general objective has to be broken down into clearly defined objectives. In turn, each specific objective must be linked to specific activities to be carried out for its attainment.

In that regard, these activities, strategies and techniques are the elements that make a preventive program achieve its objectives (i.e., be efficacious), as they

have a bearing on the risk and protective factors associated with substance use. Nevertheless, it should be noted, as we have seen in Unit 2, the potential of these elements depends largely on the methodology used to apply them.

Below are synthesized the elements included in effective school-based programs, (i.e., those empirically grounded by multiple review studies on school-based prevention of drug use):

3.1. Information transmission

Although, as previously noted, traditional programs based on the transmission of information have no effect on substance use, providing information on substances and their effects is a necessary preliminary step to prevent drug use.

For this reason, effective programs usually include an information module on the characteristics of substances (e.g., action on the organism, negative consequences in the short and long term, factors associated with the initiation and maintenance of the consumption behavior, etc.), a beliefs analysis (e.g., estimate of peer drug use, social acceptance, perceived availability, perception of risk for each substance, etc.), the correction of myths and strategies used in advertising.

Similarly, when providing information, it is necessary to take into account that the information must be objective (i.e., without using moral methods or resorting to fear), adapted to the level of understanding for the targeted age ranges, focused on short-term negative consequences and accompanied by appropriate teaching methodologies to optimize the attention to and assimilation of the given messages.

3.2. Social skills training

Social skills are probably one of the most important components of school-based programs. Social skills are the set of behaviors manifested by an individual in an interpersonal context that facilitate the establishment of relationships that are appropriate and in keeping with a given situation. The lack of these skills can contribute to the initiation and maintenance of drug use, since it can function as an alternative to achieving emotional and affiliation objectives (Pons and Berjano, 1999), by increasing the sense of confidence to properly deal with others.

Components that are commonly included in this training are skills in communication, relationship-building, and most importantly, those in resistance and assertiveness.

Resistance skills training assumes that adolescents are persuaded to use drugs by their peers, the media, etc. Therefore, this training tries to teach adolescents to identify the influences, pressures or offers they may receive to use drugs and to deal with them by resisting.

For its part, assertiveness is defined as the ability to openly express our rights and opinions while respecting the rights of others. The real intention of this training is that adolescents learn to recognize the difficulties to behaving assertively that may arise and, therefore, to behave assertively in all situations. In this way, personal identity and self-esteem are strengthened.

The excessive importance given to resistance skills training has been recently criticized for not taking into account that in most cases pressure occurs within a group of equals actively selected by the adolescent on an affinity basis. Nevertheless, the carrying out of this training, along with the development of other personal competencies and the correction of normative expectations about drug use by their peers, is essential.

3.3. Training in personal competencies and skills

Personal problems and deficits are considered important risk factors, since the adolescent can turn to drug use in an attempt to compensate for them. Thus, stress and the lack of personal competencies or coping skills are important factors that promote drug use. Therefore, along with training in social skills is included training in other more general skills that strengthen individual resources to deal with any aspect of daily life.

Some of the specific components included are: training in problem solving and decision making, setting goals and objectives, coping skills, emotional self-control (managing mood, anxiety and anger), self-reinforcement, public commitment regarding future drug use (non-use or responsible consumption), affective education (self-concept and self-esteem) and the promotion of alternative leisure activities to drug use.

Again, note that the methodology used is based on active learning strategies and interactive teaching techniques that facilitate the acquisition of such skills.

3.4. Making an impact beyond the implementation of a school-based prevention program.

As we have previously seen, many school-based programs are enhanced by the inclusion of interventions in the family, the community, the media and the school system in a broad sense.

In reference to the school climate or context, it is important to stress that the particular normative setting of schools plays a vital role since the probability that a given behavior (e.g., drug use) occurring may largely depend on the extent to which this behavior occurs in a particular environment (e.g., the school).

Therefore, it is essential to establish a "drug policy" that clearly defines rules and procedures about the consumption, availability and distribution of both legal and illegal drugs at the school and its surroundings. Similarly, the measures to take in the event of a breach of the prohibition against the use of tobacco, alcohol or other drugs by any member of the educational community should be clearly established.

In this sense, a clear school policy on drug use, especially tobacco and alcohol, facilitates the active involvement of teachers, fostering among them a role of exemplar in relation to the use of drugs.

In the same way, it is imperative that the implementation of a program be facilitated, not only by the support of the school but also by the settings closest to the students. Through the inclusion of activities that involve the family and community, the knowledge and skills learned are transferred and generalized to other contexts where students spend the rest of their time. And therefore, the likelihood that the produced positive effects are maintained over time is increased.

UNIT 4: EVALUATION OF SCHOOL-BASED DRUG USE PROGRAMS

4.1. Evaluation within the framework of the school-based prevention of drug use.

At present, the debate about preventive drug use interventions focuses on identifying the school-based programs that have proven effective, as well as distinguishing the quality control measures and best practices for carrying them out.

However, there is no clearly established and agreed upon criterion to decide in advance which program is effective and which is not. For which reason, it is recommended that only school-based programs that have proven effective in well-designed evaluation studies be applied.

In this regard, and despite the fact that in previous decades the prevention of drug use has been characterized by an absence of rigorous assessments, today we have at our disposal a reliable list of numerous school-based programs that have proven their effectiveness in the school-age population (e.g., Bühler and Kröger, 2006; Canning et. al., 2004; Gardner, Brounstein, Stone and Winer, 2001; Hawks, Scott and McBride, 2002; McGrath, Sumnall, McVeigh and Bellis, 2006; Robertson, David and Rao, 2003).

Conducting an assessment of the preventive programs that we put into practice is essential, because otherwise, unaware of the factors that influence their efficacy, we can only intuitively know whether these programs work.

In this context, the evaluation of school-based programs should be considered a form of scientific research which must be carried out using methods that maximize the objectivity of its results. In short, evaluation consists of putting research tools at the service of the process of accurately and objectively judging the value of a program.

To carry out this task, numerous authors and institutions have collaborated in the approximation of program design and evaluation techniques to the field of drug use prevention (Acero, 2004; Alvira, 2000; Ballesteros, Torrens y Valderrama, 2006; CSAAP, 1993; E.M.C.D.D.A., 2001; Robertson, David y Rao, 2004), giving rise to a large variety of models or levels of evaluation that can be differentiated according to established criteria.

Nevertheless, in spite of the large variety of typologies that have been proposed throughout the literature, such contributions can be drawn together into four levels of evaluation that are initiated even before designing or selecting the school-based program to apply:

Needs assessment. The main objective of which is to describe the problem and identify strategies to address it. In the school-based context, this first step consists of determining the prevalence and incidence of drug use in the school population, as well as the risk and protective factors present. By means of this phase, the *relevance and adequacy* of the program to develop is assessed

To proceed to these aims we can utilize various sources (e.g., statistics, secondary data, surveys, etc.). Notwithstanding, by offering a comprehensive and updated overview of the patterns and trends of drug use, epidemiological studies are an important source of information in the field of drug prevention.

In this regard, today we have at our disposition the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), whose function is to provide objective, reliable and comparable information on drug use and associated consequences at the European level. Since 1996, and with the objective of disseminating information on the scope and nature of drug demand in the European Union (among others aspects), EMCDDA prepares annual reports that act as dissemination vehicles for the information provided by partner countries.

Process (or formative) evaluation. It is performed during the application of the program in order to make improvements on and assess the adequacy of its implementation. Therefore, at this level, evaluation is directed at assessing program implementation (i.e., the extent to which programs are applied with high fidelity to the planned design) and assessing coverage (i.e., the percentage of the target population that is receiving the program). In fact, a judgment on the progress of the program would be made at this phase.

The methods used to collect the indicators characteristic of this type of assessment consist of reports on students and their characteristics, interviews and surveys, field diaries of the teachers who implement the programs, systematic or participant observation of the sessions and the conducting of focus groups.

Results (or summative) evaluation. Takes place once the program and its objective are completed and consist of determining whether the program as applied produced effects or results in the expected direction, and whether these effects can be attributed to the application of the program. This phase can include a judgment on *efficacy* as well as on *effectiveness* and *efficiency*.

The indicators that are employed measure the changes that the program's activities are trying to produce in the school population. Such indicators are often concerned with the attitudes towards various substances, the degree of objective information, generic skills and those to resist the pressure to use drugs, and, finally, with the consumption of substances in and of itself.

Impact assessment: Evaluates the program results by way of macro-indicators on drug abuse at the community level during short, medium and long term monitoring.

Impact assessment differs from the evaluation of results solely in terms of the population for which the effects of the program are analyzed. Impact assessment considers the changes on other groups besides the school population (the community, the people associated with school, etc.).

For example, when a decision is made to apply a school-based drug use program it is not surprising that changes (e.g., more unfavorable attitudes towards the consumption of alcohol and tobacco) are also observed in other groups such as the parents of students or teachers who have applied the program. To analyze the effects produced in these groups, it would be necessary to carry out an impact assessment.

4.2. What the evidence tells us about the efficacy of school-based prevention.

There currently exist several scientific quality studies that have been directed at examining the effects of school-based prevention programs. In general, the empirical evidence concludes that school-based prevention programs are efficacious in preventing and/or reducing the consumption of psychoactive substances among adolescents (Green y Glasgow, 2006; Rohrbach, Dent, Skara y Sussman, 2007; Tobler, et al., 2000).

In this regard, recently, Faggiano et al. (2008), conducted a review of 29 studies that evaluated school-based preventive programs. The main results of the study indicate that programs based on skills training, when compared to the regular curriculum, obtain significant reductions in marijuana use (RR = 0.82, CI 95%: 0,73-0,92) and the consumption of other illicit drugs (RR = 0, 45, 95% CI: 0,72-0,91). At the same time, they produce an improvement in the level of information (WMD = 2.60, CI 95%: 1,17-4,03) decision-making skills (SMD = 0.78, CI 95%: 0 ,46-1, 09) and self-esteem (SMD = 0.22, CI 95%: 0,03-0,40).

However, and despite these promising results, the specialized literature indicates that the effects of preventive programs are small and probably fade away over time (Canning et. al, 2004). This might be due to the fact that the effects of these programs are based on a delay in the start of drug use in non

drug using subjects and a reduction in the amount of drug use in some drug using subjects.

On another note, despite the importance of assessing the overall effect of school-based programs, a crucial aspect in the assessment of their efficacy refers to the specific components that are related to their success.

 In this sense, there are numerous studies (systematic reviews and meta-analysis) which have tried to identify the essential elements of school-based programs for the prevention of drug use. The following are the features that figure most prominently in the specialized literature on universal prevention programs aimed at adolescents:

4.2.1. Intensity of the programs

With respect to the intensity of the programs, the evidence has failed to clarify what the optimal number of sessions is. There are studies which show that intensive programs (i.e., more than ten sessions) are effective, although intensity alone does not ensure effectiveness (White and Pitts, 1998). Tobler et al. (2000), assert that interactive programs increase in efficacy as the number of sessions is increased. However, Black et al. (1998) found that 68% of interactive programs with an intensity of 6 hours produced significant changes.

Other authors indicate that both short programs (i.e., less than 4.5 months) and long ones (i.e., more than 4.5 months) yield similar results. Therefore, extending the length of programs does not produce extensive benefits and is inefficient (Gottfredson and Wilson, 2003).

4.2.2. Booster Sessions

Many studies have indicated that adding booster sessions or some similar reinforcement has a positive effect on the impact of the programs. The programs that introduce booster sessions manage to maintain the achieved positive effects and even increase them on occasion.

Various types or formats of booster sessions have been used in recent years. They include e-mail and phone interventions (Elder et al., 1993), additional classroom sessions (Ellickson and Bell, 1990) and even dossiers with preventive materials (Dijkstra et al., 1999). In general, all booster session formats reinforce the messages and skills that have been acquired upon program completion.

Regarding the optimal number of booster sessions, the literature varies widely (from three to eight sessions). Commonly, programs are applied more intensively in the first year with a few sessions carried out in subsequent years (approximately 2 years). Some authors even suggest that a third booster phase be done when prevalence data indicate an increase in drug use or when the context of drug use changes (Maggs and Schulenberg, 1998; Shope et al., 2001; Williams et al. 1999).

4.2.3. Focused on one substance or multiple ones

Today we have a well documented model of drug use initiation and escalation. It argues that drug use follows a definite sequence which begins in the early stages with alcohol and tobacco consumption and progresses to cannabis consumption (gateway drugs), resulting in the use of other illicit drugs at later stages.

The majority of school-based prevention programs are frequently aimed at reducing, delaying or eliminating the consumption of tobacco, alcohol and cannabis, based on the supposition which affirms that by reducing the consumption of these gateway drugs early on, the use of other drugs at later stages of development is reduced. As a result, the effectiveness of programs has been principally assessed on the consumption of these three substances as opposed to that of other illegal drugs.

Broadly speaking, the adoption of programs focusing on a single substance is defensible. It is noted, in fact, that programs focusing on tobacco are three times more effective than those focused on multiple substances (Tobler and Straton, 1997).

In this respect, Rooney and Murray (1996) found average effect sizes in tobacco consumption of 0.11 at posttest and 0.10 at follow up. Similarly Sussman et al., (Sussman, Dent, Stacy, and Sun 1993), found that it is possible to reduce the weekly tobacco consumption of young smokers by approximately five percentage points with programs that are specifically designed to prevent tobacco consumption.

Programs focusing on alcohol consumption, although not as successful as tobacco programs, are also more efficacious than the multidrug ones (Tobler 1992). These results are particularly pertinent for students over the age of twelve. Broadly speaking, it is argued that younger students can generally

benefit from drug prevention (Tobler, et al., 1999). However, this view should be guided by the local prevalence data.

4.2.4. Age of subjects

Prevention programs should be applied at the appropriate stages of development, especially when it is most likely to have an impact on behavior. In this regard, some authors (Gottfredson and Wilson, 2003) have found an advantage for programs applied to adolescents between the ages of 11 and 14, although the differences were not statistically significant and effect sizes were small (d = 0.09).

In short, although there is no clearly established age, there is unanimous agreement in affirming that the best preventive proposal is that which is to be carried out before the phenomenon of drug use appears.

4.2.5. Implementer Training

Many authors classify training as one of the key components of evidence-based drug prevention programs. By using the expertise of the faculty conducting the program, a higher level of fidelity to the manuals is achieved; therefore, better results are obtained. The provision of prior teacher training is beneficial for several reasons:

1. First, it helps reduce resistance, generate a more favorable attitude toward the program and increase commitment and motivation. All of which increases the teacher support for the program, facilitating, in turn, the achievement of objectives.

2. On the other hand, an appropriate knowledge base increases personal resources and promotes the confidence and comfort to impart knowledge.

3. Similarly, by providing sufficient knowledge on the subject, unrealistic or negative expectations regarding the results and benefits obtained by implementing the program are corrected. Risk and protective factors are important not only to prevent or reduce drug use, but also to improve and increase personal potential. Explicitly pointing this information out, contributes to the perception of other benefits or results along with those concerning drug use. The perception of these benefits can help us align our objectives with the values of the school.

4. Teachers are sometimes reluctant to implement the program, because they consider the idea that a program, in a few sessions, can act against the phenomenon of drug use naive. Through training, the positive effects of the program and its scope can be detailed. Although it is also important to clarify that both research and the influence of risk and protective factors is a matter of probabilities.

5. Likewise, the provision of adequate knowledge of the program fundamentals generates a greater understanding of the key concepts and components. This contributes, in turn, to decreased deviation from the original protocol and facilitates its implementation.

6. Finally, in the application of evidence-based programs, it is essential that teachers applying the session generate a high level of interaction, guide the class towards the session objectives and create an atmosphere of safety and feedback. To be properly employed, the interactive methodology requires a suitable skill set and a certain degree of comfort. Therefore, it is necessary to train teachers on how to teach interactively.

In conclusion, ensuring that teachers have the adequate knowledge and skills and feel comfortable applying the drug prevention programs requires a certain type of training.

4.2.5.1. Principal features of training that optimize the fidelity of the programs

There are very few studies that analyze the actual impact that training has on the performance of teachers and/or the results of students. The few studies that have assessed teacher training have focused primarily on analyzing whether some training strategies or components are more efficacious than others. In these studies, when strategies have produced positive effects, these have occurred mainly in the degree of knowledge acquired by teachers and, to a lesser extent, in the attitudes held towards preventive approaches (Dusenbury, et al., 2003).

With regard to the features of the teacher training, studies indicate that it should include direct training on the application of sessions, employing videos and role-playing and be followed up with booster sessions.

Furthermore, training is best appreciated when it is done by the program designers, offered to motivated teachers and lays out concrete and detailed instructions.

As for the types or models most effective in improving implementation fidelity on the part of teachers, the studies that have addressed this issue show that live workshops are no more effective in increasing implementation fidelity (Botvin et al., 1990, Basen-Enquist et al., 1994) or programs outcomes (Cameron et al., 1989) than other modalities.

Nevertheless, it has been found that after live training, in comparison with video training, there is a greater likelihood of applying role-playing programs and techniques (Basen-Enquist et al., 1994). In this regard, Kelly et al., compared three versions of training: materials only (self-instructional), intensive (2-day workshops) and workshops along with telephone technical support for six months and concluded that the third version got better rates of adoption and implementation of prevention programs (Kelly et al., 2000).

One final point to note refers to training duration. Usually, the duration of training workshops ranges from one day to three weeks. However, it is argued that more extensive training is associated with greater fidelity (Fors and Doster, 1985; Smylie, 1988; Perry et al., 1990) and better outcomes (Fors and Doster, 1985).

SELF–ASSESSMENT EXERCISES

1. The first programs developed to prevent drug use were based on:
   a) the transmission of information and the use of fear.
   b) affective education.
   c) training in resistance skills.

2. Resistance skills-based programs focus on countering the influence on adolescents by:
   a) the leisure and entertainment industry.
   b) community conditions unfavorable to a healthy lifestyle.
   c) the group of peers.

3. Personal skills improvement programs emphasize components such as:
   a) resistance skills training against the offer of drugs.
   b) the acquisition of personal and social skills of a general nature.
   c) strategies based on the use of fear.

4. Based on their implementation methodology, school-based programs can be classified into:

    a) interactive and non-interactive programs.

    b) universal, selective and indicated programs.

    c) specific and non-specific programs.

5. According to the meta-analysis studies carried out by Tobler et al., the programs that achieve the best outcomes:

    a) emphasize affective content and interactive methods.

    b) employ generic skills and non-interactive methods.

    c) are based on the social influence model and interactive methods.

6. In reference to the activities, strategies or components that that constitute the efficacious elements of a school-based program, research highlights that:

    a) their preventive potential depends on the methodology with which they are applied.

    b) at present there is no clear empirical evidence about what these components are.

    c) they are the so-called "black box" of prevention.

7. An information module is a component that all efficacious programs usually include. However, when transmitting information, it should be borne in mind that the information:

    a) be subjective and moralistic.

    b) focus on long-term consequences.

    c) adapt to the level of understanding of students.

8. Among the elements that efficacious school-based programs include, specialized literature highlights:

    a) informative talks given by former drug users.

    b) training in social skills.

    c) citizenship education.

9. The implementation of a program in the school setting is enhanced by:

    a) the inclusion of visits to nightlife venues.

    b) the establishment of a clear school policy on drug use.

c) the fact that it is not important that it include actions that affect other settings dear to adolescents.

10. The assessment phase that consists of both describing the problem and identifying strategies to address it is called:

  a) process assessment.

  b) impact assessment.

  c) needs assessment.

11. Evaluating the extent to which a school–based program has been implemented with fidelity to the planned design is known as an assessment of:

  a) the efficiency of the program.

  b) the implementation of the program.

  c) the relevance of the program.

12. The field journals filled in by teachers are an example of an indicator that we can employ in the evaluation of:

  a) results.

  b) impact.

  c) process.

13. The evaluation of outcomes may include judgments about:

  a) the efficacy, efficiency and effectiveness of the program.

  b) program progress.

  c) program adequacy and relevance.

14. Impact assessment differs from the assessment of results:

  a) in assessing the percentage of the target population that receives the program.

  b) solely in the population about which the impact of program is analyzed.

  c) because it is done once the implementation of the program has been completed.

15. As regards the features most emphasized by the review studies on school–based prevention, the specialized literature indicates that:

    a) the optimal number of sessions is 15.

    b) programs increase their impact by adding booster sessions.

    c) programs should only be applied to students who have already started habitual drug use.

16. In reference to the prior training of the teaching staff responsible for implementing the programs:

    a) it should include the application of the sessions, use of videos and role playing, and be followed up with booster sessions.

    b) it increases the cost of the implementation of programs.

    c) it affects the fidelity of the implementation of programs but not its efficacy.

Solutions:

1:A; 2:C; 3:B; 4:A; 5:C; 6:A; 7:C; 8:B; 9:B; 10:C; 11:B; 12:C; 13:A; 14:B; 15:B; 16:A

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Selection of links

– Government Delegation for the National Plan on Drugs (Spain)

   http://www.pnsd.msc.es/Categoria2/publica/otras.htm

– Elisad

   http://www.addictionsinfo.eu/

– Health-EU. The Public Health Portal of European Union. Drugs

   http://ec.europa.eu/health-eu/my_lifestyle/drugs/index_en.htm

– INID (Drug Research Instittue*)*

http://inid.umh.es/

– Irefrea

http://www.irefrea.org/

– National Institute on Drug Abuse

http://www.drugabuse.gov/

– European Monitoring Centre for Drugs and Drug Addiction

http://www.emcdda.europa.eu/html.cfm/index44131EN.html

– Substance Abuse & Mental Health Services Administration: United States Department of Health and Human Services

http://www.samhsa.gov/

UNODC. United Nations Office on Drugs and Crime

http://www.unodc.org/