

An Introduction to the Principles and Techniques of Intervention in the Crisis of Drugs Addiction

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Abstract

Introduction: this study aims to explore infidelity crisis pathology and providing therapeutic protocols to reduce damages resulted from infidelity. In this study, various drugs have been described, including hallucinogenic drugs, cannabis and hemp plant sap, drugs, causing sluggishness, actuators, etc. Also, causes of addiction and its durability factors are reviewed. Moreover, treatment pattern of addiction has been determined, including school-based programs, community-based programs, family-base programs, social development model and Integrated Model.

Methods: This is a narrative review, based on books and internet resources. Prestigious and well-known information databases such as PubMed, Medline, Scopus and other databases using were used by concepts that are somehow related to development, implementation, and evaluation of mental health promotion programs.

Results and Discussion: according to the issues mentioned above, the necessity of addressing addiction is so clear to everybody. Generally, interventions at the addiction level can be classified as follows: school-based programs, community and media-based programs, family-based programs, approach to changes in environments and rules, social development model and integrated model.

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Introduction

Drug addiction is one of the crises in the world today. "It is of the newest problems of people and families and unfortunately, we are facing increasing trend of this crisis, especially among young generation". Drugs are defined by World Health Organization (WHO) [1] as any substance that can affect one or more functions of the brain after being entered into the body. This definition encompasses drugs such as tobacco, alcohol and illegal substances such as heroin and LSD [2]. In this definition, drug abusers are considered as patients. Simply speaking, addiction is a dependent state to substances that are repeatedly used with necessity with a specific quantity in a certain time in terms of consumer and has the following features:

- It creates physical dependence
- It creates psychological dependence
- Tolerance phenomenon in the body is created to the consumed substances
- Substance needed should be achieved in any form and by any means.
- Consumed drugs has devastating effects on consumer, family and society [3].

In DSM-IV, the term "abuse" is called for the state that a person is affected to disorders, due to a substance use; but does not yet meet the criteria for substance dependence. Accordingly, a substance abuse is milder than dependence to that substance, and abuse pattern of this group against above group is not irresistible and does not have compulsion aspects [4]. However, it leads to pernicious and mortal effects of drugs and abuse pattern can be of

various kinds that is associated with physical hazards, such as using drugs in driving or occurring technical problems. Following algorithm helps better to understand time sequence of drug use:

Use (without problem) abuse (problematic) dependency (very problematic)

Drugs classification

In the latest classification of WHO [5], drugs are classified into the following eight categories:

- 1) Hallucinations: Inconsistent and incoherent set of materials that acts as the weakening or irritating of the central nervous system. The main effect of these substances are creating substantial emotional, behavioral, mood, and mental changes in person. The most well known and most popular group of hallucinogenic drugs are LSD, PCP, MDA, PMA, TMA, DMT, STP, DOM, Mescaline or Peyote, Psilocin and Psilocybin.
- 2) Cannabis or Hemp plant sap: This class of drugs impair the central nervous system and the best-known and most popular of these drugs are marijuana, hashish and THC [6].
- 3) Drugs: these substances are moderators of central nervous system activities and are in the group of lassitude drugs. They greatly relieve pain and are addictive. It often creates a state of euphoria and hilarity in people [7].
- 4) Moderators (painkillers, sedatives): it includes drugs and substances that is led to sluggishness of central nervous system activity, loss of reason, sensation and



consciousness among people. The most prominent types of drugs of this group are barbituric that includes drugs such as Skonal, phenobarbital, Amital (amylobarbitone), Methaqualene (Mandraks), Thiopental, Secobarbital, Doridene, Mitiperilone, Pelasidin, Flurazepam and alcohol [8].

- 5) Sedatives: they are the type of drugs that include alcohol, barbiturates and narcotics, which can be natural (derivation of opiates such as morphine and codeine), semi-synthetic (such as heroin) and synthetic (such as methadone and demorel). Sedatives are addictive [9].
- 6) Glue and self-volatile substances (inhalants): volatiles can be found in many industrial products such as adhesives that are fast drying, fuel such as gasoline, solvents such as acetone and thinner and detergents [10].
- 7) Stimuli: This class of materials has led to excitement and energy and ultimately stimulating central nervous system activity. These medicines are usually used for high tolerance, for staying awake for long periods of time, loss of appetite and hilarity. Their physical characteristics of some amphetamines are coca, cocaine, crack, Khat, Keratm, NAS, CUP (Yazheh), straw and drums, doping and anabolic steroids [11].
- 8) Alcohol, tobacco and coffee: these medicines are also called invisible or forgotten medicines. Many consumers do not recognize or are unaware that these three categories of substances are also addictive [12].

Factors creating addiction

1. Learning and Conditioning

Drug abuse cause feelings of pleasure in person by influencing one's reward pathway of the brain. Brain's reward pathways are mesolimbic, including dopamine neurons [13]. Enjoy felt by enjoyable activities like watching beautiful scenes or joyful things that have been abused causes increased activity of dopamine neurons of the brain reward pathway [14]. Therefore, using drugs that give feelings of pleasure acts as positive reinforcing and causes strengthening of behavior by conditioning [15]. If using these drugs cause good mood, relaxation, relief, focus or other favorite experiences, its probability for continuance will be more likely; but if the first time experience is unpleasant such as cough, heart attacks with nausea, chance of using that substance will be reduced [16].

2. **Biological factors:** Some of these factors include genetic vulnerability, which is especially important in alcoholics and it is well known in substances such as cannabis and smoking [17].
3. **Personal features:** People who have problems such as the followings are at risk of drug dependence [18].
 - Aggression
 - Cognitive dysfunction, such as difficulty in planning, attention, concentration, forward-looking, judgment, positive attitude to drug and that drug use is pervasive in society
 - Running away from school and poor school performance

- Mental disorders, particularly mood and anxiety disorders.

Against these features, characteristics such as academic achievement, high goals, high intelligence, good communication skills and emotional control, high self-esteem, problem-solving ability, flexibility and proper religious beliefs can protect the person against addiction [19].

4. Familial factors

Family problems play an important role in drug addiction of family members. Among these problems can include:

- loss of a parent due to death, divorce and imprisonment
- abnormal high control and high support by one parent (usually mother)
- father who is emotionally cold and do not actively participate at home
- Being influenced and dependent on brothers or sisters who are drug-dependent.
- Regular blaming of the child because of family problems
- Addiction of one parent [20].

5. Social factors

These factors are amongst the main causes of drug consumption [21]. The high prevalence of drug use in society will occur; especially in a peer group that one is related to be among the onset of drug use. Peers try to take along others in drug use with pressure and encouragement. Especially, adolescents addiction to drugs to make themselves well-known and due to the availability of drugs and improper information about drugs effects will be higher in the era of social change, more possibly in freshmen and high school students [22].

6. Addictive effects of drugs on brain

The major cause of drug continuance is its impacts on brain, which shows itself as tolerance and withdrawal phenomenon [23].

Positive reinforcement impacts of drugs: different drugs create special internal state (psychological) that is often desirable and cause enhancing consumption behavior [24]. It seems that the neural pathways involved in drugs strengthening impacts are semi-opium, amphetamine, cocaine, and to some extent, marijuana, nicotine and alcohol. Dopamine neurons in the nucleus accumbens area of the brain and their extension in nucleus accumbens structures rises during drug abuse [25]. This neural pathway is so-called reward circuit. In addition, the activation triggers of this region in each of these materials are different [26].

Negative reinforcement impacts: negative reinforcement is an important factor in drug addiction [27]. Adaptive changes will occur in the brain with long-term use of most materials that shows itself as acute withdrawal syndrome and chronic interruption. This encourages individuals to enhance their consumption behavior [28].

Principles and techniques involved in crisis of drug addiction

School-based programs

School-based programs is of different approaches:

1. Educational-cognitive programs: These programs increase children's knowledge about alcohol and drugs. There are concerns that such programs can lead to increased drug use because of the attention and curiosity of children.
2. Affective-interpersonal programs: these programs aim to increase understanding emotions and interpersonal relationships, and awareness of communication and decision-making processes. These programs are caused in the context of social learning theory and problematic behavior hypothesis. Despite weighty infrastructure these programs have, but they have little efficiency in reducing drug use, changing attitudes or delaying the onset of drug use.
3. **Alternative programs:** these programs are based on this hypothesis that providing skills and making quality may lead to reduced drug abuse. The effectiveness of these programs are unknown. Reports indicate that if these programs are in the form of entertainment, sports, or social activities outside the curriculum or career in some children, it will lead to increased consumption, but if it is in the form of inter-school activities or entertainments and religious activities, it will lead to reduced drug use.
4. **Behavioral programs:** that are of two types of behavioral programs:
 - **Social influence approach:** that study the effects of factors that increase drug use, such as pressure from parents, peers, and the focused media and increasing the individual's coping skills that help individual resist against these effects.
 - **Personal-social skills training:** that is based on principles of social influence model and help students learn the type of personal and social skills that have common usage. Both methods are effective, especially when combined together. But some researchers believe that peer pressure hypothesis as the main component of addiction tendency is a simplistic hypothesis [29].

Social and media-based programs

These programs, which deal with training prevention through media or social groups, have ambiguous results [30]. Propaganda programs include universal prevention and advertising against drugs. There are evidences that positive impacts of these kinds of programs are wasted away by repeated broadcasting of commercial images of legal drug use (such as tobacco and alcohol) in the press and television. On the other hand, if these programs are not combined with other preventive programs, they will have little impacts in changing attitude and willingness to use drugs in the society, especially among teenagers. Programs implemented at the society level, such as public education programs or organizations favored to prevention, have little effect in changing drugs use behavior. However, this causes the sensitivity of the community and community leaders to drug use issue [31].

Family-based programs

These programs include skills training that help parents provide their children the proper growth and environmental factors. Parents, as appropriate models for

children to imitate, learn how to train feelings of responsibility to their children according to the capabilities and limitations of various ages and stages of child development. Helping to create a good character and respect to children are of great importance in parent's educational programs.

Family education, especially parents, should be in terms of appropriate order and authority [32].

These programs are of three kinds:

1. Parent education and family skills training: Studies have shown that this program reduces risk factors in children and effective parent skills learning.
2. Various methods of family therapy
3. elf-help groups of family

Social development model

Social development model has been proposed by Hawkins and Weiss [33] which explained aberrant behaviors such as substance use on social ties. Social development model [34] is emphasized on individuals, social development and their social interaction. The impact of family, school and peers on adolescent behavior, changes along with adolescent growth. According to Hawkins & Weiss, adolescents are more inclined to peer drug users under the following conditions:

1. Ample conditions and opportunities are not provided for enhancing social interactions at home and school.
2. His/her interpersonal and academic skills for successful and desired interactions at home and school is low
3. No proper reinforcement is received for social interactions with parents and teachers

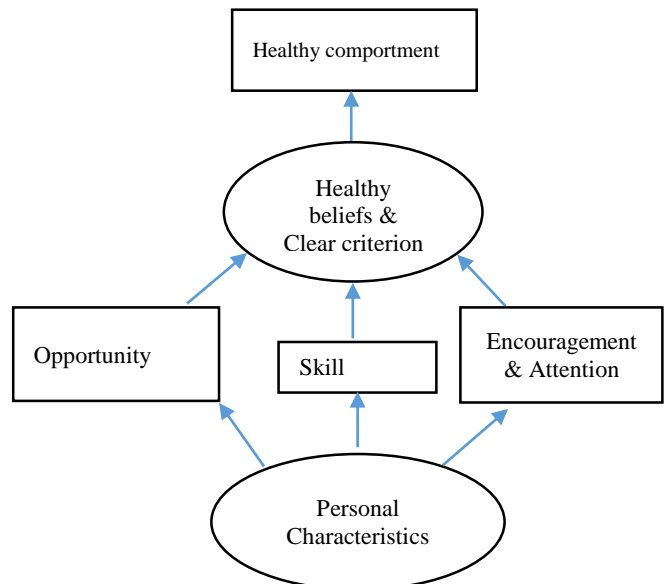


Figure 1. social development model

Integrated Model of drug use

Having been reviewed studies conducted in the field of risky and protective factors of drug use among adolescents and youths, Botoyen [35] incorporated a set of factors playing roles in the onset of drug use in a comprehensive model of alcohol, tobacco and other drugs use. These factors can be grouped according to different domains or

contexts. These theoretical models consider basic elements and features of several etiology theories in drug use, including social learning theory [36], problematic behavior theory [37] self-humiliation theory, persuasive communications theory and theories related to peer-grouping [38]. According to the above-mentioned factors, social risky factors such as poor ties with family and school as well as social environment disorder are the strongest predictors of drugs use in adolescents who are at risk which influences on drug use behavior directly or indirectly through personal and social abilities, attitudes toward drugs. Therefore, adolescents who have poor ties with family and school and live in disordered and disorganized social environments and those who have friends using alcohol, tobacco or other drugs are more likely to turn to substance abusers [39].

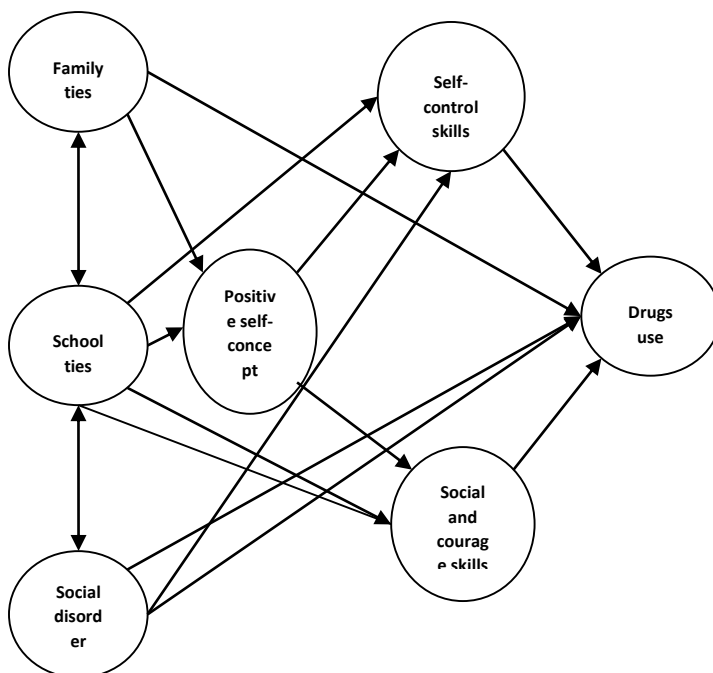


Figure 2. Structural model of drug use in adolescents who are at risk

Method

The study was conducted in a review method and is based on the type of library and Internet resources, books and articles. To search for works, the most well-known and prestigious information databases of ISC, SID, MAGIRAN, ELSEVIER, PubMed, EBSCO, SCIEDIRECT and other ones using keywords that are relevant in this context.

Discussion

Intervention techniques in addiction crisis can be divided into several types:

1. Interventions at the prevention level

Preventive programs can be divided into three levels based on the level of target society involvement to drug use: primary or universal, selective and indicative. Primary or universal prevention usually covers all regarded population, e.g. all adolescents. Selective programs are merely applied in high-risk groups such as students who

have educational problems, psychiatric problems, tense family atmosphere or bad friends. Indicative preventive programs are focused on people whose drug use is occurred on them and have one or more behavioral problems caused by drug use such as academic problems and antisocial behaviors [40].

Although broad-based educational and media (universal) programs have the advantage of covering a large mass of people, there are little evidence about their success. Secondary preventive programs, which targets people at risk (selective and indicative) also led to two contrastive results; in one hand, the person is identified and it is possible to be covered under the program, and on the other, it will be led to one's stigmatization and thus a probable discriminatory dealing with him/her [41].

2. Interventions based on psychological - social empowerment approach

Capability of reinforcing approach combines resistance skills training against social pressure with ability reinforcing skills. Theoretically, one of the most important assumptions in social and personal skills training is adolescents' problematic behaviors such as tobacco and alcohol use and other aberrant behaviors such as premature sexual behaviors and runaways; which are considered as a kind of indication [42].

3. Community-based interventions

In general, community-based programs are divided in three levels of primary, secondary and tertiary in terms of time and in terms of population covered into these categories of universal, selective and specific interventions [43].

- Universal interventions: these programs aim the whole population, which their goal is to prevent or delay the onset of alcohol, tobacco and other substances abuse among students. The main mission of public interventions is to prevent substance abuse by providing information and skills needed to prevent this issue. All members of the community are at risk for substance abuse; although, this risk may be very high among some people.
- Selective interventions: these program, unlike universal one, aim at a special subgroup of the general population, who are at risk for substance abuse for specific reasons, e.g. children with alcoholic and drug addict parents, students experience academic failure, dropout students, etc.
- Specific interventions: Specific prevention strategies are designed to prevent the onset of substance use in individuals who do not meet the criteria for diagnosing addiction, but show early signs of alcohol and other substances use [44].

4. Basic principles of community-based prevention programs

National Institute on Drug abuse has been identified a set of fundamental guiding principles of community-based interventions by a review of studies in the field of substance abuse prevention. These guidelines are the result of several studies that have been conducted in recent years on the etiology and prevention of substance abuse [45].

Principle one: Prevention programs should be designed so that the "protective factors" are strengthened and "Risk Factors" are changed or reduced.

Principle two: Prevention programs should include all different types of tobacco, alcohol, cannabis, opiates, etc.

Principle three: Prevention programs should offer training to resist drug use, reinforce beliefs and personal commitments against drug use, increased social competence in social relationships, peer relationships, the ability of courage and strengthening anti-drug attitudes.

Principle four: preventive programs for adolescents and youths should use both training and interactive methods, such as chat groups and discussion among peers.

Principle five: preventive programs should cover "parents" or caregivers to confirm and strengthen what is learnt by adolescent about drug use and its harmful effects. Also, it should provide a condition for exchanging ideas among families about drugs use, its regulations and how family deals with drug use by children and strengthen family ties and relationships [46].

Principle six: Prevention programs should be long-standing, and be delivered in various academic courses.

Principle seven: Prevention programs in schools and universities should include all of the students, while include specific at-risk groups for substance abuse. e.g. children with behavioral problems or learning disabilities or children who are likely to drop out. The more target population is at risk, the more focused and early prevention programs are needed [47].

Principle eight: Prevention programs should be age specific, period of developmentally appropriate and culturally sensitive and delicate.

5. Hope therapeutic approach

Snyder's theory about the process of experiencing hope in a particular situation has an important contribution to addiction treatment and in any situation where the goal is worth pursuing. Promising targeted behavior is determined by the interaction of the following cases:

1. The rate is given to return or value purpose
2. Thoughts about possible pathways towards goals and related expectations and that how effective it is in achieving the outcome or goal.
3. Thoughts about personal experiences and that how the person will be succeeded in pursuing pathways towards goals [48].

All three factors above are based on two thought categories that are taken from past experiences to current situations.

1. Thinking about the passage to the goals based on the lessons of transformation in correlation and causal relations
2. Thinking about teaching resource based on its evolution as a causative factor or causal loops

All these relations are shown with bolded arrows in the figure below:

Thin arrows represent feedback processes, which targeted behavior influence on current and long-term thoughts about the passageways focused on goals and the role of individual agency in achieving the goals and rate of valuation of current objectives [49].

6. Life Skills Training Program

What distinguishes this approach from other prevention approaches is its special emphasis on underlying individual differences.

Theoretically, there are two distinguishing features for personal and social skills training programs, including:

1. Using therapeutic strategies for modifying underlying cognitive and interpersonal factors.
2. Emphasis on general living skills for influencing the consumption of various substances (alcohol, cannabis, etc.) and preventing from occurring other behaviors such as early sexual behavior, delinquency and poor academic performance.
3. The cause of addiction among some people is their inability to deal with hardships and difficulties in life. Unfamiliarity with the proper defense mechanisms causes brittleness and harboring to addiction. Therefore, training some skills will increase people's defensive power and prevent their tendency to become addicted. The most important skills are problem-solving skills and resistance against groups pressure [50].

7. Psychological-social empowerment of adolescents and youths at risk

Psychosocial empowerment of adolescents and youths at risk is a multi-component preventive program that is designed to strengthen personal and social skills and improve self-esteem in at-risk adolescents and youth. This training program is designed based on risky and protective factors of drug use in these groups. The main objective of this program is to make changes in knowledge, attitudes and behaviors of adolescents and youth [51].

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