The Role of Personal Beliefs and Cognitive Avoidance in the Tempting Ideas of Addicts Who are Under Treatment by Preventive Medicine

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ABSTRACT

Background and objective: Because of the increases in the number of drug abusers and addicts in the recent decades in most countries in the world, expansive and costly projects are being accomplished locally, nationally and internationally in order to fight against drug abuse. Objective of this survey is to determine the relationship between personal beliefs and personal avoidance with tempting ideas in addicts under treatment by preventive medicine.

Methodology: This survey is a descriptive study and uses correlation patterns. Statistical population of this survey is the individuals suffering from drug abuse who are under preventive treatment in the city of Mashhad, individuals who have attended 5 substance and drug abuse treatment centers in this city in 2015-2016 (according to the data achieved from these centers, there were 250 clients). In order to select the survey samples, 180 individuals were determined (determining sample size by the use of Cochrane’s formula), and they were asked to respond to questionnaire items. The applied questionnaires in this study were: Survey of Personal Beliefs (SPB), Cognitive Avoidance Questionnaire (CAQ) and Craving Beliefs Questionnaire (CBQ).

Results: The results of multiple regression analysis showed that personal beliefs, elements of other-directed should and high tolerance of failure are predicting factors of tempting ideas in the addicts under treatment by preventive medicine. The results also showed that the elements of cognitive avoidance as well as appeasement and substitution thoughts are the predictive elements of tempting ideas in the addicts under treatment by preventive medicine. In order to study the simultaneous role of personal beliefs and personal avoidance, the results showed that the elements of none-awfulization and high frustration tolerance (personal beliefs) have positive roles, and the cognitive avoidance elements including: thought appeasement and substitution have positive roles in prediction of tempting ideas.

Conclusion: The results of this survey showed that cognitive structures such as personal beliefs and cognitive avoidance are predictive elements of tempting ideas in the addicts.

Keywords: Personal beliefs; Cognitive avoidance; Tempting ideas; Methadone.

INTRODUCTION

Drug abuse is one of the important hygienic, social and economic problems in many countries. The problem of addiction to drugs is one of the important and serious issues in the international level which has attracted a lot of attention to itself in terms of economic, social, political and physiological aspects [1]. Addiction (dependence on drugs, being poisoned by drugs), as a social, mental and historical problem, is one of the critical problems of the modern world which threatens to bring down human societies. According to the 4th edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), the basic symptom of dependence on drugs is a collection of cognitive, behavioral and physiological signs which, despite
having considerable and related problems, the individual continues to use them. There is a pattern of repeated consumption which usually leads to inability to tolerate deprivation and compulsory behaviour [2]. According to the carried out studies, drug use is the cause of one out of every ten deaths among adults all over the world in which if correct preventive treatment is conducted, the possibility of poisoning and overdose would considerably decrease [3,4]. Still, using preventive medicine by itself is not sufficient for treatment. The researchers have concluded that three fourth of individuals who have completed the treatment period, have returned to drug use within one year after completion of treatment [5].

Most addicts stop using drugs many times during their addiction period, but start using drugs again after some time [6]. Addiction, like any other chronic disorder, needs timely management of treatment [5]. Many theorists in the field of drug abuse believe that emotional factors are effective on the individuals’ tendency to use drugs and on the level of temptation of the people under treatment. Temptation is one of the important factors experienced in the time of drug abuse. World Health Organization has recognized temptation as the basic reason for dependence on drugs, losing control and return to drugs [7]. In many modern definitions of medical dependence, temptation has been mentioned as the central phenomenon and the main factor in continuation of drug use as well as the main factor of return to drug use after treatment periods [8]. The term “desire” or “temptation” has a fundamental role in explaining many of the addictive behaviours. This term is used to explain high levels of drug abuse in returning to drug use. Temptation to use drugs has an important role in returning after treatment and continuation of using conditions as well as dependence on drugs [9]. It is also one of the most effective factors that lead to recurrence after stopping drug use [10].

Temptation is the strong and resistant desire to use drugs which, if not fulfilled, will lead to psychological and physical sufferings such as weakness, anorexia, insomnia, anxiety, aggressiveness and depression [11]. A lot of studies related to individuals dependent on cocaine show that there is relationship between temptation and recurrence of drug use with temptation and medical results in cigarette consumers [12,13]. Tendency to use drugs is a serious global problem nowadays and a collection of factors play roles in its creation. However, in every special cultural and social case, and for every individual, some of the factors play more important roles in etiology of drug abuse [14].

In this survey, the role of personal beliefs has been studied on the tempting ideas in the addicts under treatment by methadone. Personal beliefs are potentially a reason for tendency towards the use of drugs. Some of their examples could be mentioned as the following: “not using it leads to continuation of unfavourable and bad cognitive events, and negative cognitive events become more intensive, etc.” such different beliefs lead to recurrence of addiction.

Personal beliefs have roots in social factors and are the elements which can be effective on tempting ideas in the addicts under treatment by methadone [15]. Beliefs are the thoughts that the individuals accept as truth [16]. Kerch and Kerchfield have defined belief as follows: “Belief is an individual’s sustainable organization of cognition and a relative identification of a special aspect of the world”. In a more expansive sense, beliefs include cognition or knowledge, creeds or faith [17]. Demario believe that irrational personal beliefs include awfulizing beliefs (overestimation of an event), self-directed should, other-directed should, low-frustration tolerance (low estimation of resistive skill) and self-worth [18]. Ellis believes that irrational beliefs are the beliefs that are not based on reality and their consequences are destructive behaviours and emotions which threaten mental and emotional health of the individual [15].

According to Wales, personal beliefs might represent differences in skills; altogether, disordered personal beliefs weaken resistive skills and following that, cognitive interactions (irrational beliefs) and behavioral interactions (ineffective behaviors) are created. In this regard, tempting ideas and drug related beliefs can be examples of the consequent irrational beliefs from these cognitive interactions [19]. Gawin and Abulghasemi showed that existence of wrong beliefs leads to formation of ineffective cognitive and behavioral interactions in the individuals and by weakening resistive skills; they prepare the ground for drug use [20]. Now, this issue is under discussion that how irrational beliefs help reinforce tempting ideas. In other words, by the use of what cognitive mechanism, irrational cognitive thoughts strengthen the way to formation of tempting ideas. Personal beliefs can lead the individual to drug abuse or to avoid drug abuse [21]. Irrational thoughts are subjective assumptions and beliefs which the individual has about him, about the outside world and the future. These thoughts cause the individual’s cognition to be influenced by events and affect his feelings and behaviours. They are psychological problems related to irrational thoughts. When human beings experience tense events, irrational thoughts cross their minds and following that, they experience and follow a feeling. The individual imagines that avoidance and staying away from problems of life and personal responsibilities is easier than dealing with them. Avoidance has some advantages and disadvantages. Some examples of avoiding response are as follows: social seclusion “the individual avoids getting closer to others”, avoidance of showing negative emotions “the individual avoids the situations where he might have to express his negative emotions”, and avoidance of conflict “the individual avoids situations where he might have to submit to demands of others” [22].

Structure of avoidance refers to getting rid of an action or freedom from an individual or a thing which reduces anxiety, but in the long term, it leads to some problems [23]. According to the cognitive-behavioural ideas about drug abuse disorders, individuals suffering from addiction have special emotional patterns which are experienced as unexpected and negative thoughts such as inhibition, rumination, cognitive avoidance of negative emotions and continuation of worries [24]. According to the theoretical principles and survey proofs, cognitive avoidance has been defined as the automatic process of farness from threatening patterns and the patient’s worries which are identified as the important factor in starting and continuation of drug abuse disorders [25]. Cognitive avoidance leads to incompatible behaviours, and individuals suffering from drug abuse disorder make efforts to prevent these responses; this
leads to their further agitation along with continuation of cognitive avoidance and decrease of their life qualities [26]. Avoiding responses of the patients cause problems in identification and acceptance of emotions so much so that they believe that these emotions are unclear and also believe that they lack effective strategies in modifying them. Therefore, as Jacob and Bech stated, the avoiding modes in drug abuse disorders lead to pointless circle of worries and continuation of disorder in them compared to the conditions in healthy individuals [27,28]. According to Borkovic, cognitive avoidance leads to negative reinforcement of processing emotions and also continuation of the disorder. Regarding the mentioned subjects and considering the fact that personal beliefs and cognitive avoidance can be effective factors on tempting ideas in the addicts under treatment by preventive medicine, this survey tries to study the share of each one of personal beliefs and cognitive avoidance in relation to tempting ideas in the addicts under treatment by preventive medicine.

**METHODOLOGY**

The applied method in this study is descriptive and its type is correlational. The statistical population includes the individuals suffering from drug abuse under preventive treatment in the city of Mashhad in the time period 2014-2015; individuals who have referred to 5 drug abuse treatment centers in this city. In order to select the survey samples out of the clients of these centers, 180 individuals were selected by the use of Cochrane's formula. They were asked to respond to survey questionnaire items. The inclusion criteria to the survey were: diagnosis of dependence on opium, heroin and crack as the last abused substance according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), the centers’ sterilization diagnosis, the age range of 20-40, literacy, 6 months experience of using preventive substances, non-diagnosis of other mental disorders and consent to participate in the survey.

**SURVEY TOOLS**

The demographic features form: This form includes personal information (male and female), level of literacy (primary school, secondary school, diploma, or higher), marital status (married, single, divorced), household status (alone, with spouse, with children), economic status (good, average, bad), family relationships (good, average, weak) and existence of physical problems (yes, no).

Survey of Personal Beliefs (SPB): This 50 item tool has been compiled [18]. It measures personal beliefs of individuals with 5 subscales of awfulization (AW), self-directed should (SDS), other-directed should (ODS), low frustration tolerance (LFT) and self-worth (LSW). The individuals’ overall score of personal beliefs is measured out of the total scores of five subscales. Minimum and maximum of the scores in every one of the subscales of evaluation of personal beliefs were respectively 10 and 60; and the range of overall score of personal beliefs was between 50 and 300. Psychometric features of this scale were evaluated in a sample size of 762 individuals out of the general population (387 female and 375 male samples). Cronbach’s alpha coefficients of subscales of awfulization, self-directed shoulds, other-directed shoulds, low frustration tolerance, self-worth and the overall score of personal beliefs are respectively \( r=0.78 \), \( r=0.81 \), \( r=0.83 \), \( r=0.73 \), \( r=0.77 \), \( r=0.85 \); and they were significant in the level \( p<0.001 \). These coefficients are signs of satisfactory reliability retest of the scale of personal beliefs evaluation [29]. Structural validity, convergence and diagnostic Beck depression inventory, Beck anxiety inventory, list of positive and negative emotions and the scale of mental health were measured on the samples. The results of Pearson’s coefficient correlation showed that there is negative significant relationship from 0.41 to (\( p<0.001 \)).6 between the scores of samples in the irrational beliefs with positive emotions and psychological welfare; and there is significant positive correlation between scores of samples in irrational beliefs with depression, anxiety, negative emotions and psychological frustration ranging from 0.47 to 0.63 (\( p<0.001 \)). These results approve convergent ad diagnostic validity of the evaluation scale of personal beliefs [30].

Cognitive Avoidance Questionnaire (CAQ): This questionnaire includes 25 items. It was first prepared and validated [31]. This questionnaire includes 5 subscales and evaluates five types of cognitive avoidance strategies. Items 1, 2, 5, 6 and 14 are related to the thought appeasement, items 4, 11, 17, 20 and 25 are related to thought substitution, items 8, 10, 12, 13 and 21 are related to absent-mindedness, items 7, 9, 16, 18 and 22 are related to avoidance of threatening stimulants, and items 3, 15, 23, 19 and 24 are related to turning of imaginations to thoughts. The samples responses to the items were on the basis of Likert Scale between 1 (never) and 5 (always). This questionnaire, too, was first translated into Persian and validated on the Iranian version [32]. In Basak Nejhad reliability coefficient of this scale was measured by Cronbach’s alpha in all samples for the overall score of cognitive avoidance as 0.91 [32]. It was respectively 0.90 for the subscale of mind appeasement, 0.71 for thought substitution, 0.89 for absent-mindedness, 0.90 for avoiding threatening stimulant and it was 0.84 for turning imaginations into thoughts. Validity coefficient of this tool was measured 0.48 by the use of White Bear mind appeasement inventory which was significant in the level \( p<0.01 \). Therefore, the findings show that this questionnaire has appropriate psychometric features.

Craving Beliefs Questionnaire (CBQ): This questionnaire is a self-measurement scale prepared by Wright and Beck (1993) and measures ideas related to temptation of using drugs from the mental, physical and behavioral aspects. It has 20 items and every one of them has been graded in a 7-grade scale (1=completely disagree, 7=completely agree). Higher scores show more awful and unreal ideas about the temptation of using drugs. Reliability and validity of this questionnaire have been reported as good. In order to check validity of this questionnaire, considering the carried out studies on the level of temptation and direction of attention towards the stimulants related to drugs, Pearson’s correlation coefficient was reported 0.28 [33,34]. Also Muhammad Khani reported reliability of this questionnaire by the use of Cronbach’s alpha (0.77) and in another survey, reliability of this scale was measured (0.84) by the use of Cronbach’s alpha and (0.81) by the use of Bissection method [34-38].
RESULTS

Study of the demographic indexes showed that in all samples, 32.7% had primary education, 10.2% had secondary education, 15.3% had diploma, 33.3% had associate degrees, and 8.5% had bachelor’s and higher education. Descriptive indexes and correlation coefficients of survey variables have been mentioned in Table 1 after screening and omission of odd ones.

Table 1: Descriptive indexes and correlation coefficients of survey variables.

| Variables                  | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| None-awfulization          |       |       | 1     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |
| Self-directedness          |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Other-directedness         |       |       |       |       |       |       |       |       |       |       |       |       |       |
| High frustration tolerance |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Self-worth                 |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Personal beliefs           |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Tempting ideas             |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Thought appeasement        |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Thought substitution       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Distractio n               |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Avoiding stimulants        |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Turning                    |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Avoidance                  |       |       |       |       |       |       |       |       |       |       |       |       |       |

Results of Table 1 show that there is negative and significant relationship between none-awfulization, none-other-direction, high frustration tolerance and desirable personal belief, with tempting ideas. Also, there is positive and significant relationship between thought appeasement, thought
substitution, turning imaginations into thoughts and cognitive avoidance, with tempting ideas.

**Table 2**: Coefficients of the model of predicting tempting ideas on the basis of predicting variables of appropriate personal belief indexes and personal avoidance indexes.

| Model                           | R      | R²     | F      | P      | B     | Standard deviation | β     | t     | Level of significance |
|---------------------------------|--------|--------|--------|--------|-------|--------------------|-------|-------|-----------------------|
| None-awfulization               | 73/0   | 53/0   | 85/18  | 0001/0 | -     | -                  | -     | -     | -                     |
| None-self-direction             | -      | -      | -      | -      | 59/0- | 285/0              | 16/0- | 06/2- | 041/0                 |
| None-other-direction            | -      | -      | -      | -      | 13/0- | 292/0              | 03/0- | 45/0- | 655/0                 |
| High frustration                 | -      | -      | -      | -      | 56/0- | 331/0              | 11/0- | 68/1- | 095/0                 |
| None-self-worth                 | -      | -      | -      | -      | 76/0- | 245/0              | 23/0- | 09/3- | 002/0                 |
| Thought appeasement             | -      | -      | -      | -      | 53/0- | 313/0              | 12/0- | 70/1- | 091/0                 |
| Thought substitution            | -      | -      | -      | -      | 64/1- | 474/0              | 21/0- | 46/3- | 001/0                 |
| Distraction                     | -      | -      | -      | -      | 69/3- | 501/0              | 59/0- | 36/7- | 0001/0                |
| Avoiding threatening stimulant  | -      | -      | -      | -      | 52/0- | 396/0              | 099/0-| 31/1- | 192/0                 |
| Turning imaginations into thoughts | -      | -      | -      | -      | 77/0- | 501/0              | 11/0- | 53/1- | 127/0                 |

In order to study objective of this survey, multiple regression has been used. Evaluating the assumption of error frequency normality by the use of Kolmogorov-Smirnov showed that error frequency is normal (p ≥ 0.05). The Statistic Durbin Watson also shows independence of errors (1.77). The index of tolerance 0.62 to 0.71 and the index of variance inflation 1.41 to 2.27 also show none multiple convergence of predicting variables. Summary of the model and simultaneous regression coefficients of tempting ideas according to personal beliefs and personal avoidance have been mentioned in Table 2.

Coefficients recorded in the above table show significance of regression model and they also show the identified variance 0.53 in the tempting ideas according to personal beliefs and personal avoidance. Comparing regression coefficients show that only thought appeasement (β =0.21) and thought substitution (β =0.59) significantly predict tempting ideas.

**DISCUSSION AND CONCLUSION**

The survey hypothesis is that: personal beliefs and cognitive avoidance are predicting factors of tempting ideas in the addicts. The results of this survey showed that there is significant relationship between personal beliefs and cognitive avoidance, with tempting ideas in the addicts. Warren, Sigrid and Johns (2012) in their survey titled “Cognitive bias and irrational beliefs as predictors of cognitive avoidance” found out that cognitive bias (including: estimation of mental probability cost of disastrous events and irrational beliefs) and irrational beliefs are strong predictors of cognitive avoidance. Researchers concluded that the post-treatment time after hospitalization or after treatment in rehabilitation centre is a critical period in which the individuals under treatment are inclined to high risk of recurrence of drug abuse. Out of the clarifying factors which had the highest relation with recurrence of drug abuse, three factors were the most important of all. These factors are:

- Much personal avoidance.
- Cognitive factors (like personal efficacy, beliefs, and negative and irrational perspectives).
- External situations/friends, family, society.

Almost two third of those who experience recurrence have said that cognitive factors, and usually having low personal efficacy and irrational beliefs about drugs are effective in initial mistakes; but individuals without recurrence had higher personal efficacy and did not have irrational beliefs about drugs.

Also analysis of the results shows that individuals without recurrence, compared to individuals with recurrence, had better conditions in terms of irrational beliefs. Since the individuals themselves play the highest role in leaving addiction and avoiding recurrence (temptation), if the addicted individuals reach this belief that using drugs is not an appropriate solution to get rid of problems, and on the other hand, if they have
knowledge about rational and principled solutions when they face problems, they will act in any other different way and will not get trapped again by drugs. Behaviors of individuals are originated from their beliefs. Therefore, the addicted individual, too, has positive perspective of drugs. The requirement of leaving addiction, in addition to physical detoxification, is changing the addict’s belief. Velasquez believes that the basis of prevention attitude from recurrence and temptation is wrong beliefs which are the roots of irrational thoughts which, in turn, lay the bed for recurrence of drug abuse. Also in Marlatt’s model, reinforcement of rational beliefs, as one of the amending skills, minimizes the possibility of turning mistakes into recurrence. Some limitations of this survey were as follows: using self-assessment questionnaire, limitedness of survey samples to male participants leaving addiction in the city of Mashhad which, in turn, was effective on generalization of its findings, its temporariness, and impossibility of causal inference from generalizing it to other groups. It is also suggested that in the future studies, in order to increase validity and analyse the results more precisely, bigger sample size is used, the survey is carried out on women with drug abuse; and also by approval of the hypothesis about the role of appropriate personal beliefs on decrease of tempting ideas, it is suggested that centralized cognitive interferences be conducted on this group of individuals in order to correct their irrational beliefs.

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