



Original Article

Comparison of cognitive emotion regulation strategies among drug-dependent people and non-drug-dependent people in Ilam Province-Iran in 2017



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ABSTRACT

Introduction: drug dependence disrupts all the dimensions of individual, family and community life. The purpose of this study was to compare cognitive emotion regulation strategies in drug-dependent people and non-drug-dependent people in Ilam Province-Iran.

Methods: This case-control study was performed on two groups of 100 people (drug-dependent people and non-drug-dependent people) through convenience sampling. Data were collected by Garnefski Cognitive Emotion Regulation Questionnaire, and then analyzed by descriptive statistics and ANOVA, using SPSS.v22 software.

Results: According to the findings of the present study, the case group has a significant difference in the cognitive emotion regulation strategies with the control group ($P = 0.003$). The case group used more negative cognitive emotion regulation strategies ($P = 0.021$) and control group used more positive cognitive emotion regulation strategies ($P = 0.019$). The case group had lower cognitive emotion regulation than the control group ($P = 0.003$) and they use lower positive cognitive emotion regulation strategies ($P = 0.019$).

Conclusion: The results showed that drug-dependent people used negative cognitive emotion regulation strategies rather than control group. The high use of negative cognitive emotion regulation strategies is one of the risk factors for drug abuse, which can be prevented of drug use, by appropriate preventive training.

Introduction

Addiction is a physical and psychological dependence on a variety of drugs, psychoactive and hallucinogenic substance, which, if abandoned, show signs of quitting and drug withdrawal syndrome in individuals (1). The problem of drug use has caused a lot of damage to society, and its prevalence estimated 230 million people worldwide by the World Health Organization (WHO) (2). Statistics on addiction in Iran, due to the difficulty in detecting and reporting correctly, are not accurate. But it seems that between 2 to 6 million people in Iran use drugs as addicted or for entertainment. According to available documentation, the number of addicts is approximately doubling every 12 years and increases by 8% each year. The available statistics for the health of the individual and the community are a serious threat and warning (3). Drug dependence has attracted the attention of clinical psychologists and psychiatrists; because it has long-term negative consequences in different classes of society (4).

The addiction approach is a brain disease. Addiction is increasingly being considered as a chronic and recurrent brain disorder. Drug use can cause neuropsychological damage, including damage to emotional and cognitive functions (5). The evidence suggests that the use of drugs due to dependency has a psychological, emotional and motivational effect. Substance abuse is behavioral, mental, and emotional, because after a quit period, there is a strong desire to consume drug (6). The cognitive emotion regulation is a process through which individuals (intentionally and unintentionally) adjust their emotions to achieve a desirable outcome (7). The emotion regulation in various forms has pervasive usage in all aspects of human life from the early years of life. Indeed, there is evidence that shows infants can learn behaviors such as approaching, attention, and avoiding, to control of their emotion (8). Adjusting emotion regulation is also associated with self-esteem, social interactions, increasing the frequency of positive emotions,

effective confrontation in the face of stressful situations and even expanding activities in response to social situations (9). Weak emotion regulation skills predict a high level of alcohol in the post-treatment period. In this regard, analysis of 114 studies in relation to psychopathology and emotion regulation strategies indicated that emotions suppression is associated with drug use disorders. While reassessment and acceptance strategies did not relate to the drug use (7). In a study Schreiber et al. (10) examined emotion regulation and impulsivity in drug-dependence people, and concluded that the higher emotion-disordered group showed higher scores in two components of impulsivity, including avoidance and cognitive impulsivity. This study shows the highest relationship between lack of emotion regulation and impulsivity and mention that emotion regulation may be considered an important factor, when people are at high risk of addiction. People, who are at high risk of drug use show modest, stable and emotion regulation behavior than people, who are at lower risk (11). So, weak emotion regulation is an important background for drug use disorder (12). People with drug abuse lose their ability to make correct, logical, and reality behaviors with a lack of proper recognition of their feelings and emotions. On the other hand, they also have difficulty in applying the right emotions (13). These people are having difficulty in paying attention to emotional information, correct perception, proper processing, and the proper management of excitement. These problems make it difficult for a person to solve the problem of decision-making and choosing the right behavior in the face of stressful situations (14). Collins emphasizes that an emotion-focused counteraction is used to reduce and manage emotional disturbances associated with stressful situations (15). The emotion regulation is related to success or failed in various areas of life (16). When a person is faced with an emotional situation, good feeling and optimism alone is not enough to control his emotions, he needs at this moment the best cognitive functions also have to be able to control their emotions (17). Emotion regulation is a major incentive for drug using. In fact, drug users said that their consumption is often attributed to the analgesic drugs (18). When a person is under pressure to use drugs, effective management of emotions reduces the risk of drug abuse. The ability to manage emotions causes a person in situations where there is the risk of drug use is high, uses appropriate of strategies. People with high emotion regulation have more ability to predict the desires of others. They understand unwanted pressure from others and control their emotions better, and as a result, show more resistance to the drug use (19). In contrast, those who have less emotion regulation, to deal with their negative emotions, often inclined to drug abuse (20). Studies have shown that people, who are more variety-seeking and irritable, more follow drug use (21). Inappropriate emotional development, difficulty in organizing behavioral and emotion and having negative emotions are one of the characteristics of people with drug dependence (22). Emotion regulation is accompanied by more mental capacity for social information processing. This ability can help people to better understand the negative and harmful consequences of drug abuse. So, they are more successful against of the psychological and social pressures drug use (23). Parker et al. Showed that the difficulty in recognizing emotions and inability to establish emotional relationships with others leads to drug abuse (24). Abolghasemi et al. (2011) in a study on a group of addicted people showed that the difference between addicts and non addicts in emotion intelligence and its components (attention and

identification of emotions, thinking facilitation, understanding and managing emotions) is significant (25). Emotion regulation has an important role in our adaptation to stressful life events (26). Emotion regulation is a process through which, people consciously determine, that what an emotion they have and when to experience and express them. So people who constantly blame themselves and others, they every small event think a catastrophic and they have continuous mental imagery, at one side of the spectrum. In contrast, people who have high acceptance, are positive thinking, do not blame others and working with program are on the other side of the spectrum (27). In general, the difficulty in emotion regulation and in dealing with issues is one of the problems of drug abusers. This problem leads to failure in the decisions, management of emotional and cognitive emotion regulation in drug users and. Studies about investigation the role of emotion regulation in drug dependent people are limited. The purpose of this study is to compare positive and negative cognitive emotion regulation strategies in drug-dependent and non-drug-dependent people in Ilam Province-Iran.

Methods

This is a case-control study. The statistical population of this study was non-addicted people and all drug users that referred to addiction treatment camps in Ilam Province. In this study, the sample size consisted of 200 people (100 drug-dependent and 100 non-dependent people) who were matched for some demographic variables (age, occupation, education, marriage). At first, the case group (drug dependent) completed the questionnaires and after reviewing the questionnaires, descriptive indicators of the matched variables were obtained. Therefore, the questionnaires were distributed among the control group, which according to these variables (age, occupation, education, marriage) were similar to the case group, that were selected using convenience sampling method. In this study inclusion criteria were: Age ranges from 30 to 20 years, opioid addiction, lack of chronic mental illness, lack of chronic physical illness and drug dependence between 2 - 5 years. To collect the data, Garnefski Cognitive Emotion Regulation Questionnaire (2004) was used. This is a self-assessment questionnaire designed by Garnowski and Kriich (28). The original version consists of 9 subscales and 36 questions. Negative strategies include: self-blame, blaming others, repeating the mental, catastrophic thinking and positive strategies include: again attention on planning, positive attention, positive reappraisal, and make comment. The questionnaire responses in 5 degrees (always, often, usually, sometimes, never) is provided. Creator credits have reported it by Cronbach's alpha (for positive strategies 0.91, negative strategies of 0.87 and the total questionnaire 0.93). Ghasemzadeh Nasaji et al. consistent with the above findings, reported high coefficients (between 0.72 and 0.85). In the present study validated using Cronbach's alpha for the whole questionnaire acquired 0.91. After identifying addiction treatment camps, a researcher was present at the reception in these centers and after gaining the trust and satisfaction of people to participate in the research, questionnaires were given to people. After full explanation the research goals and how to fill in the questionnaires, the participants' questions were answered in relation to the questionnaires. A set of characteristic static-stretching training for the hip flexor muscles on both limbs was performed. Since satisfactory results of static-stretching training have been proved

in groups of older adults, we used that type of exercises (15, 16). The exercises were performed when the participants were lying on their back with both lower limbs hanging from the edge of a padded table. One of the experienced experimenters exerted stretching by flexing the thigh toward the trunk at approximately 45 degrees to the horizon, while another experimenter moved the contralateral thigh downwards to make hip hyperextension. Then the experimenter flexed the knee of the stretched leg and sustained it in a position which participants reported the first symptoms of muscle discomfort for the 60s. Four alternate exercises were repeated in each leg (240 seconds per each limb).

Ethical considerations

In this research, the following considerations were observed in order to preserve the rights of participants and protect their privacy and humanity:

- A. The process of work and the time required to do it full explained to the participants.
- B. To participate in the study written consent was taken from participants.
- C. In order to protect the privacy of individuals, in the questionnaires and reports did not mention the participants' names.
- D. The participants were free, whenever they wanted to leave the research.

Statistical analysis

Finally, the data were analyzed using descriptive statistics (frequency and percentage) and one-way analysis of variance (ANOVA), through SPSS software version 22 and at the significance level of 0.05 and 95% confidence level.

Results

The mean age of the case group was 27.2 ± 3.20 and the control group was 27.25 ± 17.3 years (Table 1). From the viewpoint of the education level, in the case group 28 persons (14%) were lower than diploma, and 72 persons (36%) were diploma or higher and in the control group 26 persons (13%) were lower than diploma and 74 persons (37%) were diploma or higher. In terms of job, the highest frequency was related to service jobs with 60 persons (30.2%) in each group. In terms of marriage, in the case group 47 persons (23.5%) were married and 53 persons (26.5%) were single and in the control group 38 persons (19%) were married and 62 persons (31%) were single (Table 2). Based on the results of Table 3, 2.5% of the total participants had a weak emotion regulation, which is related to the case group (drug dependent people). 19% can adjust their emotions in moderate level, of which 12% belong to the case group (drug dependent people) and 7% belong to the control group (non-drug-dependent people). 78.5% said they could adjust their emotions to the upper limit, of which 35.5% belong to the case group and 43% belong to the control group.

Table 1. The statistical indicators of the age in the studied groups

Group	Number	Mean	Variance	Standard deviation
Case	100	27.2	10.28	3.20
Control	100	27.25	10.04	30.17
Total	200	27.22	10.11	3.18

So, there is a significant difference between cognitive emotion regulation strategies in the case group and control group ($P = 0.003$). This means that people in the case group have lower cognitive emotion regulation strategies than the control group. The results of Table 4 show that out of a total of participants, 4% have a weak negative cognitive emotion regulation, which are in the case group and the control group did not have a weak negative cognitive emotion regulation. 65.5% have negative cognitive emotion regulation in moderate level, of which 26% belong to the case group and 39.5% belong to the control group. 30.5% have high negative cognitive emotion regulation, of which 20% belong to the case group and 10.5% belong to the control group. In general, the case group uses negative cognitive emotion regulation more than the control group ($P = 0.021$). According to the results of Table 5, 7% of the total participants had a weak positive cognitive emotion regulation (5.5% in the case group and 1.5% in the control group). 70% have positive cognitive emotion regulation in moderate level (27% in the case group and 43% in the control group). Finally, 23% have high positive cognitive emotion regulation, of which 5.5% belong to the case group and 17.5% belong to the control group. Therefore, the case group uses less positive cognitive emotion regulation strategies than the control group ($P = 0.019$).

Discussion

The aim of this study was to compare the cognitive emotion regulation strategies in drug-dependent people and non-drug-dependent people in Ilam Province in 2017. According to the findings of this study, it can be concluded that there is a significant difference between cognitive emotion regulation strategies in drug-dependent people and non-drug-dependent people. This means that the case group (drug-dependent people) has low cognitive emotion regulation strategies. These results are consistent with research findings of previous studies (24, 30-32). Parker et al. (24) showed that the difficulty in recognizing emotions and inability to establish emotional relationships with others leads to drug abuse in individuals. Awareness of emotional states is broadly linked to alcoholism by facilitating avoidance of it. Fox et al. (33) found that cocaine abusers have many difficulties in regulating, understanding, managing emotions and controlling impulsivity, especially in the early stages of dependence.

Table 2. Frequency and relative distribution of respondents according to the variables of education, occupation and marital status

Variables	Category		Group	
			Case	Control
Education	Lower than diploma	Frequency	28	26
		Percent	14	13
	Diploma and higher	Frequency	72	74
		Percent	36	37
Unemployed	Unemployed	Frequency	34	35
		Percent	17.1	17.6
	Service jobs	Frequency	60	60
		Percent	30.2	30.2
Job	Employee	Frequency	4	4
		Percent	2	2
	Technical and professional jobs	Frequency	2	1
		Percent	1	0.05
Marriage	Married	Frequency	47	38
		Percent	23.5	19
	Single	Frequency	53	62
		Percent	26.5	31

Table 3. Frequency and percent of cognitive emotion regulation strategies

Variable		Group		Total	P-Value	
		Case	Control			
Cognitive emotion regulation strategies	Low	Frequency	5	0	5	0.003
		Percent	2.5	0	2.5	
	Average	Frequency	24	14	38	
		Percent	12	7	19	
	High	Frequency	71	86	157	
		Percent	35.5	43	78.5	
	Total	Frequency	100	100	200	
		Percent	50	50	100	

Table 4. Frequency and percent of negative cognitive emotion regulation strategies

Variable		Group		Total	P-Value	
		Case	Control			
Cognitive emotion regulation strategies	Low	Frequency	8	0	8	0.021
		Percent	4	0	4	
	Average	Frequency	52	79	131	
		Percent	26	39.5	65.5	
	High	Frequency	40	21	61	
		Percent	20	10.5	30.5	
	Total	Frequency	100	100	200	
		Percent	50	50	100	

In explaining this finding from the research, it can be said that drug-dependent people have less cognitive emotion than non-drug-dependent people. Lack of planning on these people, and being unaware of the skills of life, lack of faced with the difficulties and realities of life can be the cause of anomalies and tendency of these people to drugs. Therefore, a person becomes dependent on drugs due to false emotion. Mental pressure and lack of coping skills are other psychological factors related to drugs. When the individual is against the wishes of peers, he tends to drug abuse, as a result of his inability to control his emotions. According to the results, there is a significant difference between positive cognitive emotion regulation strategies in drug abuse people and normal people. This means that the case group has lower positive cognitive emotion regulation strategies than the control group. These results are consistent with the findings of previous studies (24, 34 and 35). Low levels of positive cognitive emotion regulation strategies for drug abuse people is the result of the inability for effective encounter with emotions and manage them, especially at the start of drug use (24). In explaining these results, it can be said that, when a person is under pressure for drug use, weak managed emotions increase the risk of drug abuse. On the contrary, effective management of emotions reduces the risk of drug abuse. The ability to manage emotions makes it possible for an individual to use appropriate coping strategies in situations where the risk of using drugs is high. Also, people with a high positive cognitive emotion regulation are more likely to predict the wishes of others. They understand the unwanted pressures of others and control their emotions better, so thereby more resistance to drug use (19). In contrast, those who have a low positive cognitive emotion regulation tend to use drug to deal with their negative emotions (20). Also, there was a significant difference between the negative cognitive emotion regulation strategies in people with drug abuse and non-drug abusers. Lower emotion regulation and higher negative cognitive emotion regulation strategies can be a barrier to control reusing drug

temptation. In addition, lower emotional intelligence is associated with less mental ability to process social information. This weak processing can lead to less understanding of the negative and harmful consequences of drug use and thus person fails to deal with psychological and social pressures for drug use (36). Negative cognitive emotion regulation strategies of drug abuse people are due to lack of emotional adequacy, inappropriate emotional skills, unstable relationships, and disability to resolve conflicts (23). Also, the difficulty in recognizing emotions and disability to establish emotional relationships with others leads to drug abuse in individuals (32). Inadequate emotional development, difficulty in organizing behavior and emotions, and having negative emotions are characteristics of people with drug abuse (37). It seems that these people in emotional management, decision making, control of their emotions and social skills do not have the enough ability to eliminate the deficiencies and avoid re-use of drug. In other words, lower emotion regulation and higher negative cognitive emotion regulation strategies can prevent the control of the temptation to re-use, which a kind of conflict between tendency and avoidance. In addition, lower emotional intelligence is associated with less mental ability to process social information (23). This weak processing can result in less understanding of the negative and harmful consequences of drug use and therefore person fails to face the psychological and social pressures for drug use. According to the results of this study it can be argued that one of the possible reasons for people's desire to drug use, widespread problems and deficiency in the field of emotion. Emotional deficiencies in people with stressful events are the core of psychological pathology. Another possible reason is that they want to abandon from annoying and frustrating emotional states. In other words, they use drug as a avoidant, negative and ineffective coping strategy to reduce their problems (38). The results of this study show that drug-dependent people (case group) have less cognitive emotion regulation strategies than the control group and more use negative cognitive

Table 5. Frequency and percent of positive cognitive emotion regulation strategies

Variable		Group		Total	P-Value	
		Case	Control			
Cognitive emotion regulation strategies	Low	Frequency	11	3	14	0.019
		Percent	5.5	1.5	7	
	Average	Frequency	54	86	140	
		Percent	27	43	70	
	High	Frequency	11	35	46	
		Percent	5.5	17.5	23	
	Total	Frequency	100	100	200	
		Percent	50	50	100	

emotion regulation strategies is one of the risk factors for drug abuse, and addicts show deficiencies in cognitive emotion regulation than non-addicts. Regarding the results of this study, it can be said that by identifying deficiencies in the of emotion of people with drug use, can prevent drug use with appropriate trainings.

Conclusion

It is suggested to use emotion regulation strategies to deal with this phenomenon, especially in the early stages. The selection of outpatient addicts and high-volume samples gives more credibility to findings. This study could be the basis for further research on the role of cognitive emotion regulation strategies in drug abuse behavior. The main implications of this study are the importance of developing new interventions and methods that drug abusers must learn to cope with their emotions. Treatments that specifically affect the development of cognitive emotion regulation strategies in drug abusers may help reduce negative clinical outcomes in this group. It is also necessary to educate how to emotion regulation to teens and young people in order to prevent drug abuse.

Ethical disclosure

The study was approved by Research Deputy of Islamic Azad University of Ilam Branch, the verbal informed consent was taken from the subjects, and they assured about confidentiality and anonymity of personal information

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Author contributions

The designing of the project was conducted by SA and MG, data collection was done by FM and ST. YV contributed in data analyses and FM, SA and ST wrote the paper and the final draft was approved by them and Also scientific advisors were F M and ST.

Conflict of interest

The authors declare there is no conflict of interest

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