

# The Role of Self-compassion, Cognitive Self-control, and Illness Perception in Predicting Craving in People With Substance Dependency

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## Article info:

Received: 12 Apr. 2014

Accepted: 28 June 2014

## Keywords:

Self-compassion, Cognitive self-control, Illness perception, Craving, Substance Dependency.

## ABSTRACT

**Objective:** Craving is the central core of addiction and the reason for substance abuse continuation and also returning to addiction after treatment. In order to identify the effecting factors on craving, this study was performed to determine the role of self-compassion, cognitive self-control and illness perception in predicting the craving levels in people with substance dependency.

**Methods:** This research was a correlational study. The statistical population included all the people with substance dependency referring to Shiraz addiction treatment centers from July to September 2013. One hundred and fifty people from this population were selected by multistage cluster random sampling method. Having conducted clinical interviews, they were being asked to response the self-compassion, cognitive self-control, illness perception, and craving questionnaires. Collected data were analyzed by tests of Pearson correlation and multivariate regression using SPSS 18.0 software.

**Results:** The findings showed that craving was positively correlated with self-judgment ( $r = 0.21$ ;  $P < 0.05$ ), and negatively correlated with self-compassion ( $r = -0.31$ ;  $P < 0.001$ ), cognitive self-control ( $r = -0.18$ ;  $P < 0.05$ ), and illness coherence ( $r = -0.16$ ;  $P < 0.05$ ) as one component of illness perception. Results of the regression analyses showed that 10% of craving variance was explained by self-compassion, which was one of the components of self-compassion and 3% of its variance explained by cognitive-self-control.

**Conclusion:** The results of this study showed that self-compassion and cognitive self-control are predictors of craving in people with substance dependency.

## 1. Introduction

Substance dependency is a chronic, recurrent, and complex disorder in which substance consumption continues despite negative catastrophic consequences (Jiloha, 2012). Although many prevention and rehabilitation

programs have been designed and performed for addiction, its prevalence is still high, especially in those who have completed the course of therapy (Nielsen, 2012). Craving is one of the main factors in the failure of treatment programs and relapse of addiction. The importance of craving is so much that some considered it as the heart of addiction and the reason for so frequent many relapses

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(Jason, MacQueen & Drobles, 2013). Craving is defined as subjective desire for the effects of a drug. In clinical and laboratory studies, craving is known as a significant predictor of drug consumption, drug abuse disorder, and recurrence after treatment in drug abuse disorders (Witkiewitz, Bowen, Douglas & Sharon, 2013). Breese, Sinha, and Heilig (2011) as well as Shadel, Martino, Setodoji, and Cervone et al. (2011) showed that one of the strongest predictors of recurrence in both preclinical and clinical studies is craving and many of the therapies and psychotherapies in addiction have focused on craving management and reduction. Galloway and Singleton (2009) showed that craving, which is the main factor of coming back to substance abuse, is the central core of addiction and the induced craving while facing with addiction signs is an important element in relapse and drug reuse after treatment. Craving, strong desire for experiencing drug effects, is considered widely as a significant barrier for overcoming addiction (Carter & Hall, 2013).

Research evidence shows that personality factors can explain the therapeutic outcomes in people with substance dependency. Self-compassion is one of the personality features that may relate to addictive behaviors and acts as a protective personality factor against tendency to drug use. This construct was introduced by Neff (2003) as an emotionally positive self-attitude that involves treating oneself with warmth and comprehension in problematic life situations. Self-compassion also involves offering nonjudgmental understanding to one's pain, inadequacies, and failures, so that one's experience is seen as part of the larger human experience (p. 86).

Self-compassion within this context is composed of the following three bipolar qualities: self-kindness vs. self-judgment, common humanity vs. isolation, and mindfulness vs. over identification. According to Neff (2003), the three qualities can be described as follows: self-kindness refers to the ability to be caring and supportive to oneself when managing difficult life circumstances or personal failures and to avoid being overly self-critical; common humanity represents a world view characterized by the recognition that all humans are imperfect and vulnerable and that suffering is part of the universal human experience rather than a personal affliction; and finally, mindfulness is a quality that refers to the ability to observe difficult feelings and events in the present moment without exaggerating, ignoring, or suppressing them. Self-compassion is known as a significant factor of mental function health. Neff, Hsieh, and Dejitterat (2005) reported that self-compassion has positively correlated to with adaptive coping strategies

and can be considered as a protective factor against catastrophic conditions. According to Neff (2003a, 2003b), self-compassion can be a process of adaptation, because it increases mental flexibility and health and is negatively correlated with self-criticism, fear of failure, anxiety, and depression (Neff & Vonk, 2009; Raes, 2010, Shapira & Mongrain, 2010; Terry, Leary, & Mehta, 2012), and is positively correlated with life satisfaction, optimism, happiness, positive affect (Neff, Kirkpatrick & Rude, 2007; Shapira & Mongrain, 2010), social relationships (Neff & McGehee, 2010), emotional intelligence, and self-acceptance (Neff, 2003). Gilbert (2005) showed that self-compassion improves mental health as it helps people to have a sense of safety and peace. Baker & McNulty (2011) showed that self-compassion is related to innovation for making positive changes and engaging in useful communicational behaviors. Breines and Chen (2012) showed that stimulating self-compassion is related to increase in self-improvement motivation. Self-compassion has negative correlation with self-criticism, depression, anxiety, rumination, thought suppression, and neurotic perfectionism (Neff, 2003).

Increased self-compassion also predicts mental health improvement (Gilbert, 2006). Based on Iskender and Akin (2011), self-kindness, common humanity, and mindfulness are negatively correlated with internet addiction; however self-judgment, isolation, and over-identification are positively associated with internet addiction. Basharpour, Atadokht, Khosravinia, and Narimani (2014) revealed that treatment motivation in people with substance dependency is negatively related to low cognitive self-control and is positively related to self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification components.

Research evidence showed that personal differences in cognitive self-control can also affect therapeutic consequences of substance-related disorders. Self-control is one of the cognitive control components, which is defined as the ability to regulate behavior to pursue long-term goals (Vohs & Baumeister, 2004). Strengthening the belief system of self-control, can provide better preparation to avoid arousing actions for smoking temptation. Success in reducing smoking also reinforces belief in self-control capability (Blittner & Goldberg, 1978). People with low self-control are more likely to try drugs and involve in substance use problems. Many experimental studies have reported the relationship between low self-control and problems related to alcohol, marijuana, cocaine, and other drugs (Lejuez, Magidson, Michell, Sinha et al., 2010). In this respect, Sussman, Dent and Leu (2003) in their study on a sample of 1050

subjects showed that there are meaningful negative correlation between low self-control and smoking, alcohol, marijuana, and other kinds of drug consumption. Chauchard, Levin, Copersino, Heishman, and Gorelick (2013) concluded that self-realization, self-control, worry about health, interpersonal relationships, and social acceptance may be involved in people avoidance after drug withdrawal. Stephen, Wilson, and Ross MacLean (2013) found that self-control is related differently with distinctive aspects of nicotine dependency. Although self-control is negatively correlated to smoking obsession due to the craving and tendency to avoid withdrawal symptoms, it is positively associated with stable patterns of smoking.

One of the main theoretical models of addiction is illness model. Based on this model, addiction is an illness, which requires treatment and many factors affect its improvement and one of them is individual perception of the illness. Illness perception is the patient's opinion and image of his or her illness, which affects the compatibility with the illness and eventually on life quality (Ferguson-White, 2008). Illness perception is the concept (in patient's domains of behavior) that little is known about it. Leventhal and Nerenz (1982) propounded self-regulation model that explains illness in time of diagnosis and also during the illness.

This model considers normal behaviors the result of multidimensional and complex perception of illness. According to this model, the individual plays a dynamic and active role in her or his illness perception. Illness perception covers information in 5 dimensions: nature, which means illness related tags and symptoms (like fatigue and weakness); reasons or belief about reasons, which causes illness onset; time or individual perception about illness duration depending on whether the illness is acute, periodical or chronic; consequences or expected results of the illness based on economic, social, psychological, and physical effects and the usefulness of control, treatment and improvement (Edger, Psychol & Skinner, 2003). Numerous studies have been performed on precautionary and therapeutic role of illness perception in different illnesses.

Dempster (2011) research showed that changes in illness perception like having the sense of more control is the predictor of mental health in patients. Dalbeth (2011) showed that illness perception is the predictor of symptoms and consequences severity, low self-control, treatment and patient disability.

Pamela and McCabe (2012) showed that illness perception has the greatest impact on psychological worry. Illness perception predicts depression, fatigue, and mood disorderliness. Dovydaite and Maslauskiene (2013) concluded that there is a meaningful correlation between subjective illness perception and motivation to recover in eating disorders. Zoeckler, Kenn, and Stenzel (2014) have shown that illness perception may help reducing pain symptoms in adults with rheumatoid arthritis and depression.

In conclusion, the current evidence shows that craving is the key factor in relapse and recurrence of the addiction; however, the determinants of this variable have not been well studied. The results of the previous studies showed that cognitive self-control is effective on restraining risky behaviors, and illness perception is important in the process of illness recovery, but the role of these variables in craving as an important factor in addition relapse have not been studied. Self-compassion is also a significant factor in psychological well-being, because self-compassion research is still developing, studies examining the relationship between self-compassion and some psychological variables like addiction is needed. Considering the predicting role of these variables, the purpose of the present study is to determine the role of self-compassion, cognitive self-control, and illness perception in craving level of people with substance dependency.

## 2. Methods

This research was a correlational study. The study population comprised all addicted people referring to outpatient addiction treatment centers, in Shiraz City, from July to September of 2013. One hundred and fifty people from this population were selected by the multistage cluster random sampling method and participated in this research. Considering the minimum sample size in the correlation research that is suggested 30 persons for every predictor variable (Delavar, 2011). In this study, for increasing the validity of results, 150 people were taken as a sample size.

A total of were For collecting data, first a list of all addiction treatment centers in Shiraz was provided via referring to Shiraz Welfare Organization and Medical Sciences University. Then 5 centers were selected randomly and after referring to respective centers, 30 people from each center were selected and asked to answer the questionnaires of cognitive self-control, self-compassion, illness perception, and craving individually in the center place with the presence of the researcher. Dependency

**Table 1.** Mean, standard deviation of craving, self-compassion, cognitive self-control and illness perception.

Variables	Mean	(± SD)
Craving	16.74	± 6.77
Self-compassion	79.78	± 2.28
Self-kindness	14.92	± 4.33
Self-judgment	14.54	± 3.74
Common humanity	12.12	± 3.21
Isolation	11.73	± 3.33
Mindfulness	12.41	± 3.33
Over-identification	11.69	± 3.49
Cog. Self-control	58.02	±12.92
Acute/chronic timeline	14.97	± 4.35
Cyclical timeline	10.12	±3.50
Illness consequence	16.68	±4.95
Self-control	15.56	±3.97
Treatment control	12.06	±3.55
Coherence Illness	14.18	±4.13
Emotional Expressions	14.27	±5.21

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to at least one substance, age range of 20-40 years, and having high school grade were inclusion criteria and the lack of cooperation of the participants for this study was the exclusion criterion.

In order to comply with ethical considerations, informed consent form was obtained from all participants and the purpose of the study was explained to them and they were assured that their information will remain confidential and the purpose of the study is purely research. Pearson correlation coefficient and multiple regression analysis were also used to analyze data using SPSS 18.0 software.

### Measures

**Brief Substance Craving Scale:** This is a self-reporting tool consisting of 8 items, which developed by Somoza, Dyrenforth, Goldsmith, Mezinskis, and Cohen (1995). This instrument rates time, frequency, and severity of craving on a 5-point Likert scale from not at all (0) to very much (4). This scale is highly correlated with addiction severity scales and its reliability using Cronbach's  $\alpha$  was reported as 0.88 (Somoza et al., 1995). This coefficient for subjects of this study was calculated as 0.78.

**Cognitive Self-Control Scale:** This is a 23-item scale which is developed by Grasmick et al., (1993) for evaluating cognitive self-control rate toward oneself. Subjects answer the questions on a 4-point Likert scale from strongly disagree (1) to strongly agree (5) in which high scores reflects high self-control. Based on previous studies, factor analysis of the scale items reflects only one item. Subjects scores in this scale are meaningfully correlated to other cognitive measures of self-control, and the reliability coefficient of the test is 0.81 (Grasmick et al., 1993). In this study, reliability of this scale using Cronbach's  $\alpha$  present was 0.88.

**Self-Compassion Scale:** It is a self-reporting scale consisting of 26 items that was developed by Neff (2003). This scale comprised 6 subscales of self-kindness (5 items), self-judgment (5 items), common humanity (4 items), isolation (4 items), mindfulness (4 items) and over-identification (4 items). Subjects answer to the questions on a 5-point Likert-scale from 0 (almost never) to 4 (almost always). The overall score of self-compassion is obtained by the mean score of the 6 scales (considering reverse scores). Researches related to preliminary validation of the questionnaire have shown that all 6 scales have high internal correlation and the confirmatory factor analysis have also shown that the distinct factor of self-compassion explains this internal correlation.

**Table 2.** Correlation coefficients of subject scores in self-compassion and craving items.

Variables	Craving	Self-compassion	Self-kindness	Self-judgment	Common humanity	Isolation	Mindfulness	Over-identification
Craving	1	** $-0.31$ 0.001	$-0.10$ 0.20	$0.21^*$ 0.01	$-0.12$ 0.13	$0.09$ 0.26	$-0.12$ 0.12	$0.09$ 0.24
Self-compassion		1	** $0.47$ 0.001	** $-0.40$ 0.001	** $0.48$ 0.001	** $-0.38$ 0.001	** $0.44$ 0.001	** $-0.41$ 0.001
Self-kindness			1	** $0.31$ 0.001	** $0.52$ 0.001	** $0.34$ 0.001	** $0.57$ 0.001	** $0.39$ 0.001
Self-judgment				1	** $0.32$ 0.001	** $0.50$ 0.001	** $0.37$ 0.001	** $0.58$ 0.001
Common humanity					1	** $0.28$ 0.001	** $0.63$ 0.001	** $0.24$ 0.001
Isolation						1	** $0.36$ 0.001	** $0.71$ 0.001
Mindfulness							1	** $0.32$ 0.001
Over-identification								1

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Internal consistency of the scale in previous studies was 0.92 and the test-retest reliability was 0.93 (Neff, 2003). This scale was validated in Iranian samples by Basharpour (2013) and  $\alpha$  coefficients of the questionnaire subscales have been reported from 0.65 for mindfulness to 0.92 for common humanity.

Illness Perception Questionnaire-Revised (IPQ-R): Illness perception is based on self-regulation model of Leventhal et al., (1984) from the modified form of IPQ-R and has been developed by Moss-Morris et al., (2002). It consist of 43 items and 7 subscales. These subscales include emotional expressions (patient emotional reaction during symptoms observation), treatment control (the effectiveness of used treatment by the patient in illness control), illness consequences (patient opinion about illness possible outcomes on his or her life), acute or chronic timeline (patient belief about the time that disease lasts), illness coherence (patient belief about his or her illness being understandable), personal control (patient's belief in his or her capability in controlling illness), and timeline cyclical (patient belief about his or her illness being cyclical). All IPQ-R items were rated based on Likert 5-degree range (strongly agree to strongly disagree); IPQ-R is an interval scale. The overall reliability of the questionnaire was 0.76 using Cronbach  $\alpha$  method (Moss-Morris, 2002).

Cronbach  $\alpha$  was 0.93 for illness expression, 0.85 for treatment control, 0.78 for illness consequences, 0.84 for acute or chronic timeline, 0.86 for illness coherence,

0.78 for self-control, 0.38 for periodical timeline, 0.75 for psychological features, 0.75 for elements related to immune system, and 0.23 for risk factors (Masoudnia, 2008). In this study, Cronbach's  $\alpha$  was in the range of 0.54 for periodical timeline to 0.94 for illness coherence.

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### 3. Results

One hundred and fifty male subjects with the mean ( $\pm$ SD) age of 27.92 y ( $\pm$ 8.01) y participated in this study. Thirteen people (8.7%) had primary education, 42 people (28%) had guidance school education, 63 people (42%) had high school degree of education, 28 people (18.7%) had BA and 4 people (2.7%) had higher degree of education. Twenty-three subjects (15.3%) reported their monthly income lower than \$100, 45 subjects (30%) between \$100 to \$165, 47 subjects (31.3%) between \$165 and \$300 and 53 subjects (23.3%) higher than \$300. One hundred and twenty-two subjects (81.3%) had the history of previous drug quitting and 28 subjects (18.7%) did not.

Table 1 shows means and standard deviation of participation in all variables. As seen in Table 2, results show that craving is negatively correlated to self-compassion ( $r = -0.31$ ;  $P < 0.001$ ) and positively correlated to self-judgment ( $r = 0.21$ ;  $P < 0.05$ ).



**Table 3.** Correlation coefficients of subjective scores in cognitive self-control, illness perception and Craving.

Variable	Craving	Cog. Self-control	Acute/chronic timeline	Cyclical timeline	Illness consequence	Self-control	Treatment control	Illness coherence	Emotional express
Craving	1	-0.18* 0.02	0.03 0.71	-0.11 0.1	-0.01 0.91	0.06 0.460	0.04 0.57	-0.16* 0.05	0.106 0.19
Cog. Self-control		1	-0.10 0.91	0.09 0.27	-0.01 0.90	0.04 0.58	0.04 0.61	0.03 0.64	-0.08 0.93
Acute/chronic timeline			1	**0.38 0.001	**0.37 0.001	0.30* 0.001	**0.23 0.004	0.10 0.21	0.05 0.53
Cyclical timeline				1	**0.33 0.001	**0.30 0.001	**0.27 0.001	*0.20 0.01	*0.17 0.03
Illness consequence					1	**0.31 0.001	**0.34 0.001	0.11 0.14	0.10 0.18
Self-control						1	**0.37 0.001	0.14 0.08	**0.28 0.001
Treatment control							1	*0.18 0.23	**0.23 0.004
Coherence illness								1	0.08 0.29
Emotional Expressions									1

As seen in Table 3, results show that craving is negatively correlated with cognitive self-control ( $r = -0.18$ ;  $P < 0.05$ ), and is negatively correlated with illness coherence, which is the component of illness perception ( $r = -0.16$ ;  $P < 0.05$ ).

Kolmogorov-Smirnov test was used to check the normality of data distribution in all regression models. The significance level of the test on all variables was greater than 0.05. Thus assumption of normal distribution of data was verified. The results of Durbin-Watson test also confirmed the assumption of errors independency (2.12 for the regression of craving based on self-compassion components and 1.97 for the regression of craving based on cognitive self-control). The result of the collinearity diagnostics also indicates that the predictor variables are linearly independent in both regression models.

The regression Results of showed that 10% of the variance of craving was explained by self-compassion. F-value indicated that the regression model was significant ( $F = 2.62$ ;  $P < 0.02$ ). According to table 4, regression coefficients results show that among self-compassion components, self-judgment positively predicts craving positively ( $P = 0.009$ ). The results of this table show that 0.5 in craving score increases for increasing one score on the score of self-judgment.

The Results inof craving regression based cognitive self-control showed that 3% of the whole variance of

craving is explained by cognitive self-control. F-value indicated that the regression model is significant ( $F = 4.92$ ;  $P < 0.02$ ). According to table 5, regression coefficient results show that cognitive self-control positively predicts craving negatively ( $P = 0.02$ ). The results of this table show that 0.09 in craving score decrease for increasing one score on the score of cognitive self-control.

The regression model of craving based on illness perception was not significant, which means that illness perception could not predict craving.

#### 4. Discussion

Craving has long been considered an important contributory factor in substance dependency. In most of the recent definitions of drug dependency like International Classification of Disease-10 and Diagnostic and Statistical Manual of Mental Disorders-4, craving is known as the central phenomenon and the main factor of abuse continuation and also recurrence after treatment periods. The current study was performed in order to determine the role of self-compassion, cognitive self-control, and illness perception in predicting craving in substance dependent persons. Correlation analysis results showed that craving is negatively related to self-compassion and positively related to self-judgment. Regression analysis results showed that self-compassion predicts 10% of variance of craving. These results are congruent with the results of Shapiro et al., (2005), Neff, Hesieh et al.,

**Table 4.** The results of fitting regression model to examine the relationship between craving and self-compassion components.

Dependent variable	Predictors	B	SEB	$\beta$	t	P
Craving	Constant	15.52	2.82		5.49	0.001
	Self-kindness	-0.09	0.16	-0.06	-0.57	0.56
	Self-judgment	0.50	0.18	0.27	2.66	0.009
	Common humanity	-0.17	0.23	-0.08	-0.76	0.44
	Isolation	0.13	0.24	0.06	0.56	0.57
	Mindfulness	-0.35	0.23	-0.17	-1.51	0.13
	Over-identification	0.03	0.24	0.01	0.12	0.90

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(2005), Gilbert (2005, 2006), Raes (2011), Shapira and Mongrain (2010), Iskender anad Akin (2011), Baker anad McNulthy (2011), Breines and Chen (2012), Terry, Leary, and Mehta (2012) and Basharpoor et al. (2014).

A person with high self-compassion is capable of having kindness and gentleness attitude toward itself even in the face of failures and mishaps; such an individual understands that all people may experience failure and affliction. Having such features enables individual to experience his or her emotions appropriately without removing them or yielding completely to their domination. If people feel self-compassion while facing suffering, inadequacy, or failure instead of humiliating or blaming themselves by self-criticism, they will have a sincere and free unbiased understanding of themselves. This process also contains defects and mistakes in recognition and facing with life challenges. So people with high negative self-judgment engage constantly in rumination and self-criticism and focus on their negative aspects, which increase craving in substance-dependent people. In summary, self-compassion can protect person against negative outcomes.

Correlation analysis results showed that craving is negatively associated with cognitive self-control. Regression analysis results also indicated that cognitive self-control can predict 3% of craving variance. These results are congruent with Susman et al., (2003), Lejevix et al., (2010), Amilen et al., (2013), and Stephen et al., (2013) study results based on the relationship among

cognitive self-control, drug addiction and craving. In this case, different studies showed that low cognitive self-control plays an important role in people tendency to drug abuse and those with high self-control are able to control their emotions, behavior and thought, becoming aware of the causes of their problematic behavior and recognizing them easily. If addicted people would have high self-control, they can be better prepared to avoid the action, which causes craving.

Correlation analysis results showed that craving is negatively correlated to illness coherence (component of illness perception). Although these results are not directly comparable with previous results considering lack of similar researches, (based on the studies done on similar illnesses,) this finding is compatible with the previous study results of the following researchers: DelCastillo et al., (2011) based on the effect of illness perception belief on how to deal with life threatening elements; Dulbeth et al., (2011) based on whether illness perception is the predictor of consequences and symptoms severity, low self-control, treatment, and patient incapability; Dempster (2011) study that illness perception changes such as more sense of control is the predictor of mental health in patients; Knowles, Cook, and Tribbick (2013) study about the relationship among health situation, illness perception, coping strategies, and psychological effects in stoma patients ; and Shamili et al., (2013) study that illness perception is effective on the quality of life in Multiple Sclerosis patients. People facing chronic diseases, form schemas of the illness in their cognitive

**Table 5.** The results of fitting regression model to examine the relationship between craving and cognitive self-control.

Dependent variable	Predictors	B	SEB	$\beta$	t	Sig p
Craving	Constants	22.45	2.59		8.65	0.001
	Cognitive self-control	-0.09	0.04	0.18	-2.22	0.02

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system that internal and external variables like characteristic factors, social environment and demographic elements are effective on forming them.

These factors along with illness threats affect patient's understanding of the nature, causes, treatability or manageability and consequences of illness (Stafford et al., 2009). Thus, the person with positive schemas about her or his illness is able to understand and analyze signs, symptoms, and dimensions of the illness realistically and accurately. Therefore, it is important that the person is put in the center of control and decision making in his or her illness daily treatment (Franklin, 2008). One of the illness perception components is treatment coherence in which the person has coherent and intelligible understanding of his or her illness; he or she does the same amount of effort to recover faster and to consider positive aspects of the illness.

These results are indirectly compatible with Edger et al. (2003) and Knowles et al., (2013) results. Fergusson-White (2008) showed that perception of the individual of his situation can be improved by experiencing special life condition and better social consequences and professional treatment; these factors help patients to achieve a better understanding of the illness and having a more sense of control. Ekendahand et al., (2007) came to the conclusion that knowing substance abuse as a psychosocial problem by the patient can encourage treatment process and regular continuing of the treatment. Although this factor is not sufficient alone in successful drug quitting. Tokerand et al., (2004) showed that recognition of the problem, desire to change, illness characteristics like impact of substance abuse and perceived barriers of the treatment, age, sex and tendency for receiving help, play significant role in preparation for change.

On the whole, the results of this study showed that self-compassion and cognitive self-control play a major role in craving of addicted people. This research suggests that the encouragement of self-compassion and cognitive self-control could be highly beneficial for diminishing craving. Encouraging the development of these personality factors should be useful for addicted people through helping them to counter destructive self-critical tendencies, acceptance of own defects, and dealing with their emotions with greater clarity and equanimity. Applying correlational research pattern and incapability to control some variables like the kind of substance used were the major limitations of the current study. thus, conducting many similar studies to confirm these relationships is suggested and it is suggested future researches will be done by controlling such variables, especially the kind

of used drug and also by applying retrospective pattern in order to clarify the role of these factors. Considering this study results and the significance of cognitive self-control and self-compassion in reducing craving in addicted people, we suggest self-control skills training,; also training, improving, and reinforcing beliefs, perceptions, and proper cognitive aspects and treatments based on self-compassion as the main factors in motivating and reducing craving beside other substance abuses and dependency treatment methodsfor . In sum, the present findings increase our understanding of the relationships between self-compassion, self-control, and craving. We hope that our results may help treatment agencies design suitable self-compassion and self-control development programs geared toward the addicted population.

### Acknowledgment

The authors thank all people who assisted in performing the study and accessing the data.

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