

## Modeling the Structural Relationships of Attachment Styles with Readiness for Addiction

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### ABSTRACT

**Background:** This research was conducted with the aim of modeling the structural relationships of attachment styles with readiness for addiction with mediating variables of strategies to cope with stress and cognitive regulation of emotion in recovering addicts.

**Methods:** This analytical-cross-sectional study was conducted on 300 rehabilitated addicts (18 to 55 years old) selected from 4 addiction treatment centers in Amol city in 2022 using stratified random sampling. The tools used in this research were questionnaires of attachment styles, readiness for addiction, strategies to deal with stress, and cognitive regulation of emotion. Data analysis was done based on structural equation modeling in Amos 22 software.

**Results:** Attachment styles affected readiness for addiction with mediating variables of stress coping strategies and cognitive regulation of emotion in recovering addicts ( $P = 0.006$ ,  $P = 0.0001$ ). Attachment styles had a direct relationship with stress coping strategies in recovering addicts ( $P = 0.000$ ). Attachment styles had a direct relationship with the cognitive regulation of emotion in recovering addicts ( $P = 0.0001$ ). Cognitive regulation of excitement had a direct relationship with readiness for addiction in recovering addicts ( $P = 0.0001$ ). Stress coping strategies had a direct relationship with readiness for addiction in rehabilitated addicts ( $P = 0.025$ ).

**Conclusion:** Considering the predictive power of the variables, the results can be used in the interventions and trainings in addiction treatment clinics.

**Keywords:** Attachment Styles, Addiction, Stress, Emotional Regulation.

## Introduction

The phenomenon of drug abuse is one of the most serious social problems worldwide. Statistics and evidence indicate an increase in addiction in recent decades. According to the United Nations Office on Drugs and Crime (UNODC), approximately 5.6% (275 million people) of the world's population aged 15 to 64 were drug users in 2018. Deaths caused by drug use are also on the rise, with statistics showing a 60% increase worldwide between 2000 and 2015 (Eslami-Jahromi, et al, 2021). An individual's attitude towards drugs is a type of thinking that may be rational or irrational. This type of attitude is often unconscious and permanent, making it difficult to change. One way to help addicts understand themselves is to examine their attitudes and create a negative attitude toward addiction (Narod, 2021).

The thinking and attitude of individuals with addiction drive them toward repeated use or permanently refrains them from using. Researchers have cited various reasons, including peer pressure, rebellion against parents, escape from life's uncertainties, emotional turmoil, alienation, or rejection by others (Hu et al., 2021). The history of life, attachment styles, and personality traits are effective in addiction. As mentioned, one of the important factors that can have a significant impact on an individual's attitude toward addiction is their attachment style (Foulkes, 2021). Attachment styles can play an important role in the development of addiction, such as addiction to cigarettes, drugs, alcohol, and the Internet (Arts-de Jong et al., 2016).

The attachment theory explains the process of forming an emotional bond between an infant and its mother and shows that forming such a bond and experiencing security within this framework is the foundation for transformation and adaptation in non-afflicted individuals (Speight & Tischkowitz, 2017). On the other hand, experiencing insecurity about attachment has characteristics of distrust, vulnerability, sensitivity, and communication problems.

According to attachment theory, humans are biologically prone to creating strong bonds with other humans that provide emotional support and protection (Shi, You, & Guo, 1998). Three attachment styles have been identified including secure attachment, avoidance attachment, and anxious/ambivalent attachment. Attachment styles affect an individual's coping mechanisms in stressful situations.

Secure individuals easily seek help from others while affirming the situation, while avoidant individuals show excessive sensitivity to negative emotions and attachment figures, making self-reliance a barrier for them (Konstantinopoulos et al., 2020). The study by Hamednia, Panaghi, Habibi, and Mokhtarnia (2016) showed that anxious and avoidant attachment to parents has a significant positive relationship with an attitude toward drugs and preparation for addiction. Also, anxious and avoidant attachment to parents had a significant positive relationship with readiness for addiction through the attitude toward drugs (Besharat, Noorbakhsh, Rostami, & Farahani, 2012).

Besharat, Noorbakhsh, Rostami, and Farahani (2012) reported that secure attachment style has a positive relationship with self-regulation and the severity of the disorder. There is a negative relationship between substance use disorders and insecure attachment styles (avoidant and ambivalent), which had a negative relationship with self-regulation and a positive relationship with the severity of substance use disorders.

According to attachment theory, self-vulnerability is the result of developmental failures and early deprivations that lead to dysfunctional attachment styles. Substances, as a compensatory effort, only lead to an aggravation of the situation due to dependence and further deterioration of psychological and physiological structures et al, 2019). One of the important factors affecting substance abuse is the cognitive regulation of emotion. Emotional cognitive regulation implies the use of thoughts and

behaviors that affect human emotions, and the meaning of cognitive emotion regulation is the way a person cognitively processes when faced with unfortunate and stressful events (Tang, 2016). According to researchers, people use various strategies when facing stressful situations (Tabibnia et al., 2014) [11]. The results of many researchers such as Basharpour (2012), Wu (2015), and Steiner and Van Waes (2013) show that the cognitive regulation of emotion is related to readiness and susceptibility to addiction. On the other hand, the psyches of organisms are like software versions of behaviors that change with the help of gaining experience or insight (Perez-Dandieu et al., 2015). Cognitive-emotional regulation in intelligently dealing with stressful factors is actively associated with coping strategies (Steiner & Van Waes, 2013).

One of the closely related factors to substance abuse is stress coping strategies. Nowadays, stress has become an undeniable part of people's daily lives, which can have negative impacts on their mental and physical health. Studies have shown that stress is linked to various mental and physical illnesses, and if not dealt with effectively, it can lead to unpleasant consequences (Bozkurt, İnal, Yantiri, & Alparlan, 2019). Stress itself is not the cause of disease, but the way people react to it is what causes illness. Usually, experiencing emotions caused by stressful events is so uncomfortable for a person that coping with stress becomes necessary. People adopt unique ways to deal with it. Stress coping styles are behavioral and cognitive efforts that people make to adapt to their environment more effectively (Alzoubi, Al-Smadi, & Gougazeh, 2019). The two main strategies for dealing with stress are problem-oriented coping strategy and emotion-oriented coping strategy. Problem-oriented coping strategy includes constructive actions in stressful situations and attempts to remove or change the source of stress. Emotion-oriented coping strategies include efforts to regulate the emotional consequences of the stressful event

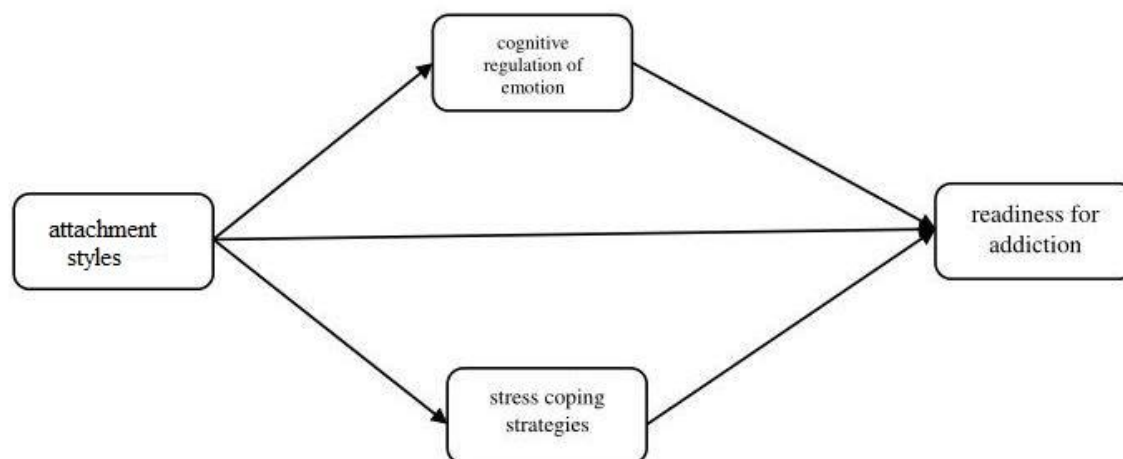
and maintain emotional balance by controlling the emotions resulting from the stressful situation (Kim, Kim, & Lee, 2017).

Some theories suggest that addiction is often related to people's ability to overcome stressful situations. They believe that due to poor coping mechanisms, addicts use addiction as an alternative mechanism to overcome stress to achieve relief and peace. People who do not have enough ability to overcome their stress and negative emotions are known as causal factors in addiction theories (Du Plessis, 2012). Studies have shown that when dealing with an environmental stressor, instead of using problem-oriented strategies and solving the problematic situation, addicts use ineffective emotion-oriented strategies such as opioid consumption. It can be said that people's inability to choose a suitable coping strategy is the factor that leads them to drug use and finally addiction. According to the coping pattern of addicts who choose an unhealthy way to cope with stressful situations, it seems that this pattern increases the tendency toward addiction and creates a vicious circle of social and psychological problems for the person (Ranjbar et al., 2013).

The issue of quitting drug use is one of the issues that have always been the concern of the authorities and also the drug abusers themselves and their families. Physical withdrawal from drugs is not very difficult; the main problem is to return and start again this bad habit. Currently, in Iran, there are no exact statistics on how many percent of the treated people return to drugs, but the number of drug addicts is increasing. Statistics indicate that the treatment methods carried out so far have not been successful or comprehensive in the country. Considering the regional differences in the thoughts, beliefs, and opinions of people, using the opinions of people suffering from drug abuse in any geographical region can be an effective way of knowing the causes of returning to addiction in the addicts of that region. Various types of research separately refer to the role of research variables in readiness

for addiction; however, the direct and indirect relationship of these factors with readiness for addiction has been less studied. By conducting this research, more appropriate intervention and treatment programs can be created. Finally, the main question of the current research was whether attachment styles are related to readiness for

addiction through the mediation of stress coping strategies and cognitive regulation of emotions in recovering addicts. Figure 1 shows the hypothetical research model for the mediating role of stress-coping strategies and emotional cognitive regulation in the relationship between attachment styles and readiness for addiction.



**Figure 1.** Hypothetical model of research

Based on the research objectives, the following hypotheses are tested:

Main hypothesis: There is a relationship between attachment styles and readiness for addiction through the mediation of stress-coping strategies and cognitive regulation of emotion in recovering addicts.

- 1.Attachment styles have a direct relationship with addiction readiness in recovering addicts.
- 2.Attachment styles have a direct relationship with stress-coping strategies in recovering addicts.
- 3.Attachment styles have a direct relationship with the cognitive regulation of emotion in recovering addicts.
- 4.The cognitive regulation of emotion has a direct relationship with readiness for addiction in recovering addicts.
- 5.Stress coping strategies have a direct relationship with readiness for addiction in recovering addicts.

## Methods

This analytical-cross-sectional study was conducted on the addicts in recovery for 1 to 12 months, in the age range of 18 to 55 years in 2022. They were selected from 4 addiction treatment centers in Amol, Iran. Sample size was calculated based on Cochran's formula with  $p = q = 0.5$ ,  $d = 0.05$ ,  $\alpha = 5\%$  and  $z = 1.96$ . Using stratified sampling (according to the number of people in 4 addiction treatment centers in Amal city), 300 questionnaires were distributed in person by researchers among addicts with drug rehabilitation.

The data analysis method was based on structural equation modeling, specifically structural regression equations (a combination of path analysis and factor analysis), a covariance-based approach based on Amos software. This approach estimated path coefficients and factor loadings by minimizing the difference between sample-based covariance matrix and model-based

covariance matrix.

**Addiction potential scale (IAPS):** The scale of susceptibility to addiction was created by Weed, Butcher, Mckenna, and Ben-Porath (1992). It has 36 items and 5 lie detector items. The scoring of each item is from 0 (completely disagree) to 3 (completely agree). The overall score is the sum of individual scores (except for lie detector questions). The scores range from 0 to 108 and higher scores indicate that the respondent was more prone to addiction.

**Questionnaire of attachment styles:** Hazan and Shaver's (1987) attachment style test materials was made and standardized for Tehran University students. It has 15 questions and three attachment styles including secure, avoidant, and ambivalent. Answering was done on a 5-point Likert scale (1 completely disagree to 5 agree). The questions related to avoidant style were 1 to 5, safe style 6 to 10, and ambidextrous style 11 to 15. The minimum and maximum scores in the subscales were 5 and 25. In Besharat's research (2000), Cronbach's alpha coefficients of safe, avoidant, and ambivalent subscales for student samples (1480 people including 860 girls and 620 boys) were 0.86, 0.84, and 0.85, respectively (for female students 0.86, 0.83, 0.84 and male students 0.84, 0.85, 0.86). Kendall's coefficient of concordance (validity) for secure, avoidant,

and ambivalent attachment styles were reported 0.80, 0.61, and 0.75, respectively. In the present study, Cronbach's alpha coefficients in safe, avoidant, and ambivalent subscales were obtained 0.73, 0.71, and 0.78, respectively.

**Stress coping strategies questionnaire:** Stress Coping Strategies Questionnaire was prepared by Endler and Parker (1990). It had 48 items and scoring was from 1 (never) to 5 (always). It evaluated coping behaviors (problem-oriented, avoidance, and emotion-oriented).

**Cognitive emotion regulation questionnaire (CERQ):** The cognitive emotion regulation questionnaire was developed by Garnefski, N., Kraaij, V., & Spinhoven, P (2001), which contained 36 items. It was based on a five-point Likert scale from never to always. It had seven subscales of self-blame, other-blame, catastrophizing, rumination, refocusing on planning, acceptance, positive focus, and positive evaluation. The alpha coefficient for subscales was reported by Garnefski et al. (2002) to be in the range of 0.71 to 0.81.

## Results

The diagram of the structural equation model was tested to check the research hypotheses for the standard estimation mode and the significance mode is shown in the figures below.

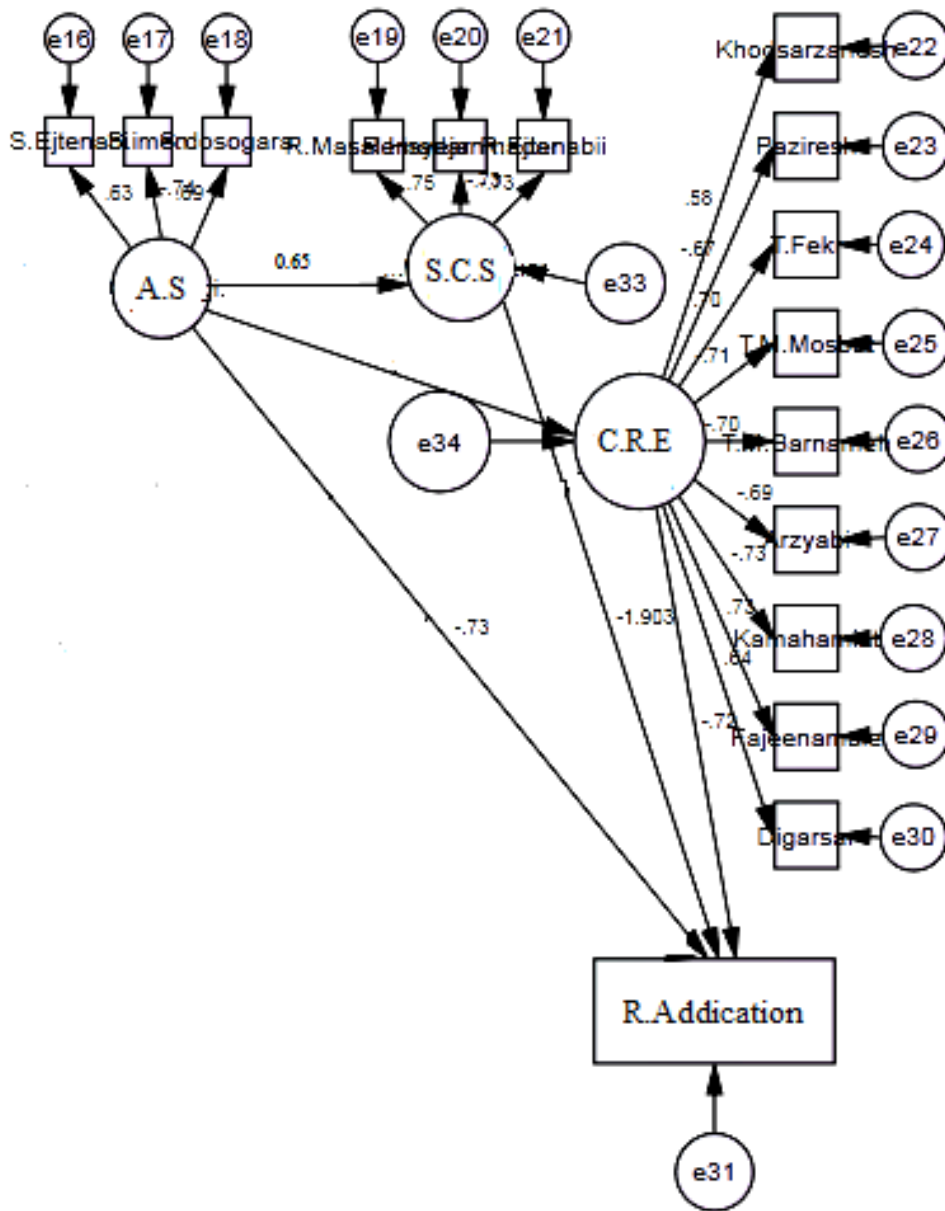
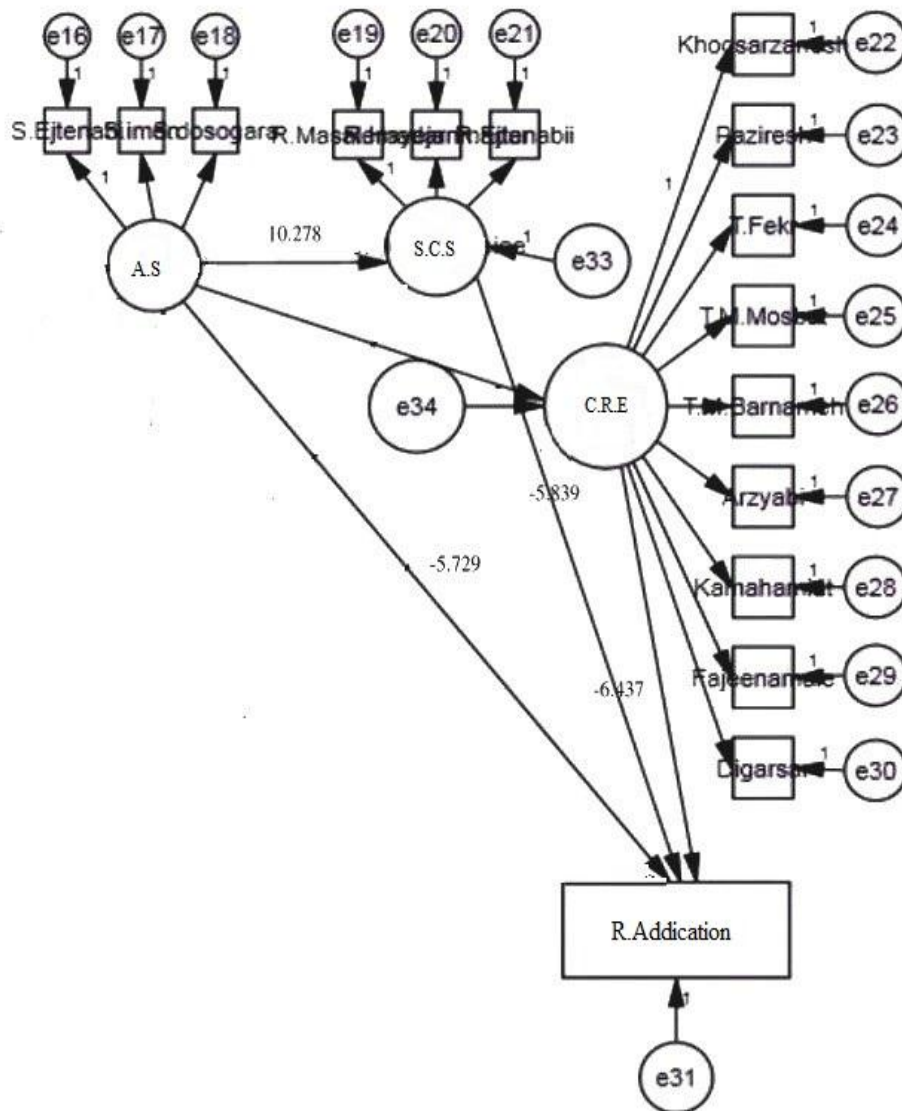


Figure 1. Structural equation model in the standard estimation mode

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**Figure 2.** Structural equation model in the significance mode

**The results of the research hypotheses test**

In order to investigate this hypothesis, structural equation model and Sobel test were used. Table 1 shows the results of the fitted model to check the research hypotheses.

Table 1 shows that the test statistics related to

the examined relationships are greater than the critical value of 0.05 ( $t = 1.96, 0.95$ ), and as a result, their significance can be accepted. To investigate the role of a mediator, Sobel's test was used. The relevant test results are shown in Table 2.

**Table 1.** Estimation of the coefficients of the structural equation model related to the research hypotheses

Independent	Dependent	Coefficient	Coefficient Standard	Estimation error	Test statistics	Sig
Attachment styles	Stress coping strategies	4.014	0.658	1.048	10.278	0.0001
Stress coping strategies	Readiness for addiction	-0.135	-0.152	0.060	-2.242	0.025
Attachment Styles	Cognitive regulation of emotion	0.392	0.425	0.047	8.371	0.0001
Cognitive regulation of emotion	Readiness for addiction	-20.492	-0.720	3.185	-6.437	0.0001

**Table 2.** The results of the Sobel test of the first main hypothesis

Mediator	A	b	S <sub>a</sub>	S <sub>b</sub>	z-value	Sig
Stress coping strategies	4.014	-5.635	1.048	1.451	-2.727	<b>0.006</b>
Cognitive regulation of emotion	0.392	-20.482	0.047	3.185	-5.092	<b>0.0001</b>

Based on the result obtained for the mediating effect of stress coping strategies in the influence of attachment styles on readiness for addiction, the z-value is higher than 1.96 and the significance level is less than 0.05. Therefore, attachment styles had an effect on readiness for addiction with the mediation of stress coping strategies in recovering addicts. Also, for the mediating effect of cognitive regulation of emotion in the influence of attachment styles on readiness for addiction, the z-value was greater than 1.96 and the significance level was less than 0.05. Attachment styles had an effect on readiness for addiction mediated by cognitive regulation of emotion in recovering addicts.

## Discussion

According to the results, it has been confirmed that attachment styles affect addiction readiness by mediating stress coping strategies and cognitive regulation of emotions in recovering addicts. According to studies, the findings of this research are in line with the results of Basharpour (2012), Besharat et al. (2011), Wu (2015), and Steiner and Van Waes (2013). To explain the results of this hypothesis, it can be said that people's attachment level to others affects their tendency to comply with their demands to gain their approval. For instance, a person who prioritizes pleasing their close friends to maintain their position in the friend group may start using

drugs if their friends use drugs. When a person manage his attachment effectively, he can make better decisions during vulnerable and abnormal situations, and he does not believe that rejecting the loved one's wishes will decrease his intimacy level or dependence.

Meanwhile, the stress a person suffers and his ability to deal with it is also important. When a person cannot properly manage his stress, he will always ask others to relieve his stress, and at this time, it is enough for a friend to offer drugs to him. Also, people experience different emotions in their daily lives, and lack of ability to cognitively manage emotions can put a person in a position to indulge in unconventional behaviors and harmful tendencies, including drug addiction, due to attachment to others.

The findings also showed that attachment styles have a direct relationship with readiness for addiction in recovering addicts. In other words, with the changes in attachment styles, a person's readiness for addiction also changes.

Addicted people who are quitting while using drugs find a kind of attachment to drugs according to John Bowlby's theory. When people are pressured to use drugs, poor management of their emotions increases the risk of drug abuse. On the contrary, effective management of dangerous emotions reduces substance abuse. In explaining the results of this hypothesis, it can be said that a

person's attachment style will be the basis of many of his personal and social behaviors. If a person is addicted to drugs, it will play a role in preparing him for addiction.

According to Balbi's theory, during the early years of people's development, according to their experiences with attachment figures and interaction with the material world, they create their inner active patterns. With the help of these patterns, a person perceives and interprets events, predicts events, and builds plans (Hazan and Shiver, 1987). Attachment theory assumes that these active models are communication schemas that are formed as a result of the rules that existed in the interactions with the original attachment manifestations, and it is inferred that attachment models are related to old cognitive schemas or beliefs. We have a close relationship with ourselves and others which affect interpersonal interactions and are affected by them. As a result, the origin of the emergence of attachment styles and initially incompatible schemas is the child's experiences that are formed in the relationship with caregivers.

It was confirmed that attachment styles have a direct relationship with stress coping strategies in recovering addicts. In other words, with the changes in attachment styles, stress coping strategies also change. In explaining the results of this hypothesis, it can be said that addicts' attachment styles are effective in how they deal with stress. Drug addicts use substances and become dependent on the environment they spend with other addicts. These people find a way to solve their deficiencies in the use of drugs. At the time of addiction recovery, these people will change the old ways of coping with stress and will try to cope with stress with new activities. Stress exists in different periods of human evolution, and a person faces different sources of stress throughout his life, one of these periods is the addiction withdrawal period that addicts face. Therefore, coping strategies that were used in the past are not applicable, and new strategies will be replaced.

It was found that attachment styles have a direct relationship with the cognitive regulation of emotion in recovering addicts. In other words, with the changes in attachment styles, the ways of cognitive regulation of the individual's emotions also change. In explaining the results of this hypothesis, it can be stated that a person's attachment styles are different in different life situations, and recovering addicts need to change their attachment style according to the change in their addiction status. Several factors can cause emotional problems in recovering addicts. Factors that originate from within the person, personality, and individual characteristics can be created as a result of the new environment in which the person is placed. The process of cognitive emotion regulation includes all the conscious and unconscious strategies that a person uses to increase, maintain, or decrease one or more components of an emotional response, including experiential, behavioral, and physiological. Therefore, by changing the attachment style, we will see a change in a person's emotional response in different situations.

The results showed that cognitive regulation of emotion has a direct relationship with readiness for addiction in recovering addicts. In other words, with changes in the cognitive regulation of emotions, the level of readiness of a person for addiction also changes. Addiction, which is considered one of the high-risk behaviors, includes a wide range of underdeveloped, pleasure-seeking behaviors, and is generally associated with high levels of risk, which can affect the way of managing one's emotions. Addicted people who are quitting controlling their emotions no longer use the methods they used to control emotions during addiction, and in general, the type of emotions that a person experiences after addiction is different from before. The correct cognitive regulation of emotions after quitting addiction will play an important role in re-orientation of the person in preparation for addiction and if the person cannot regulate his emotions well, he will return to addiction and

considers lack of emotional peace and lack of emotional stability as the result of not taking drugs. Therefore, there is a relationship between cognitive regulation of emotion and readiness for addiction.

The results also indicated that strategies to cope with stress have a direct relationship with readiness for addiction in recovering addicts. In other words, with changes in stress coping strategies, a person's readiness for addiction also changes. One of the reasons for drug abuse is the use of ineffective coping skills. Due to weak coping skills, the ease and comfort caused by drug abuse become more attractive and pleasant for such people. Coping processes are more specific strategies that people use against stressful life situations and include people's cognitive and behavioral efforts in interpreting and overcoming problems. A problem-oriented coping strategy includes constructive and useful actions that a person takes in facing stressful situations and includes active coping strategies, planning, avoiding competitive activities and hasty actions, and seeking instrumental support.

### Conclusion

The results of this research showed that according to the predictive power of cognitive emotion regulation variables and stress coping strategies in the effect of attachment styles on readiness for addiction, it is possible to use the results of the effects of these variables in interventions and training in addiction treatment clinics.

### Suggestions

According to the obtained results, the following suggestions are provided:

Cultivating conscious attention in addicted patients may be a way to increase trust in treatment and thus improve addiction. To achieve this goal, patients with insecure attachment anxiety in their close relationships should be encouraged to express the problems they have experienced in those relationships. Therefore, we recommend that you consider attachment styles

when assessing problems with emotion regulation. Patients should be aware that treating patients with severe insecurity due to anxious attachment may compromise the effectiveness of treatment.

- To increase stress coping strategies in recovering addicts, it is suggested to teach effective coping styles, including how to deal with stress and increase life satisfaction, to adapt and improve living conditions.

- To reduce the readiness for addiction in recovering addicts, more attention should be paid to the category of cognitive regulation of emotions. It is possible to prevent the relapse of drug addicts by training them in the field of emotion management and regulation, emotional self-awareness, and behavioral counseling to people undergoing treatment in addiction treatment centers.

- It is suggested that classes to learn about the compromised strategies and how to manage the cognitive regulation of emotions should be included in the addiction prevention program to prevent people from progressing toward addiction.

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Considering that this article was not an intervention, it does not have a code of ethics.

### Conflict of interest

The authors declare no conflict of interest.

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### Ethical Considerations

In the present study, the following ethical principles were considered for the participants:

- Informed and voluntary consent to participate in research

- Having the right to withdraw from research

- Non-disclosure of research information without the consent of the participants

- Protecting participants' privacy and confidentiality
- Avoid harm to participants

- Accepting the loss or losses resulting from participation in the research

## Code of Ethics

IR.IAU.BABOL.REC.1402.087

## Authors' contributions

H. E. B, M. E, contributed to the design and implementation of the research; R. D, contributed to the analysis of the results and to the writing of the manuscript.

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