

Modeling the Structural Relationships of Attachment Styles with Readiness for Addiction with the Mediation Cognitive Regulation of Emotion in Addicts Who Are Quitting

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ARTICLE INFO

Original Article

Received: 11 Dec 2023

Accepted: 02 Apr 2024



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ABSTRACT

Background: This research aimed to model the structural relationships of attachment styles with for addiction readiness with mediating variable cognitive regulation of emotion in quitting drug addicts.

Methods: This is an analytical-cross-sectional study. The sample included 300 rehabilitated addicts (18 to 55 years old) were selected from 4 addiction treatment centers in Amol city in 1401 using stratified random sampling. The tools used in this research were the questionnaire on attachment styles, readiness for addiction, cognitive regulation of emotions. Data analysis was performed based on structural equation modeling in Amos 22 software.

Results: The findings manifested that attachment styles affect addiction readiness with the mediating variable being cognitive regulation of emotions in recovering addicts ($P = 0.006$, $P = 0.0001$). Attachment styles were directly related to the cognitive regulation of emotions in recovering addicts ($P = 0.0001$). Cognitive regulation of excitement had a direct association with readiness for addiction in drug addicts who are quitting ($P = 0.0001$).

Conclusion: The results can be applied in the interventions and trainings of addiction treatment clinics with regard to the predictive power of variables.

Keywords: Attachment styles, addiction, emotional regulation

How to cite this paper:

Elahinezhad M, Ebrahimi Moghadam H. Modeling the Structural Relationships of Attachment Styles with Readiness for Addiction with the Mediation Cognitive Regulation of Emotion in Addicts Who Are Quitting. J Community Health Research 2024; 13(1): 69-76.

Introduction

The phenomenon of drug abuse is considered as one of the most serious social problems worldwide. Statistics and evidence indicate an increase of addiction in recent decades. According to the United Nations Office on Drugs and Crime (UNODC), approximately 5.6% (275 million individuals) of the world's population aged 15 to 64 were drug consumers in 2018. Furthermore, deaths caused by drug use are on the rise, with statistics uncovering a 60% increase worldwide between 2000 and 2015 (1). An individual's attitude about drugs is a type of thinking which can be rational or irrational. This type of attitude is frequently unconscious and permanent, inducing it complicated to change. Examining attitudes and creating a negative attitude about addiction is one strategy to assist addicts understand themselves (2).

The thoughts and attitudes of addicted individuals drive them to use repeatedly to abstain permanently. Researchers have cited various reasons, including peer pressure, rebellion against parents, escape from life's uncertainties, emotional turmoil, alienation, or rejection by others (3). Life history, attachment styles, and personality characteristics are effective in addiction. As mentioned earlier, one important factor that can significantly influence an individual's attitude towards addiction is their attachment style (4). Attachment styles can play a substantial role in the development of addiction, involving addiction to cigarettes, drugs, alcohol, and the Internet (5).

Attachment theory explains the process of forming an emotional bond between an infant and its mother and exhibited that forming such a bond and experiencing security within this framework is the basis for transformation and adaptation in unaffected individuals (6). On the other hand, attachment insecurity is characterized by distrust, vulnerability, sensitivity, and communication problems. According to attachment theory, humans are biologically predisposed to form strong bonds with other humans which provide emotional support and protection (7). Three attachment styles have been identified: secure attachment, avoidant attachment, and anxious/ambivalent attachment.

Secure individuals readily seek help from others and affirm the situation, whereas avoidant individuals reveal excessive sensitivity to negative emotions and attachment figures, making self-reliance a barrier for them (8). In a study entitled "The Effect of Anxious and Avoidant Attachment on Preparation for Drug Addiction with the Mediating Role of Attitude towards Drugs," Hamednia, Panaghi, Habibi, and Mokhtarnia (2016) concluded that anxious and avoidant attachment to parents has a significant positive relationship with an attitude towards drugs and preparation for addiction. In addition, anxious and avoidant attachment to parents had a significant positive relationship with preparation for addiction through an attitude about drugs (9).

Besharat, Noorbakhsh, Rostami, and Farahani (2012) demonstrated in their research entitled "The Moderating Role of Self-regulation in the Relationship between Attachment Styles and the Severity of Substance Use Disorders" that secure attachment style has a positive relationship with self-regulation and the severity of the disorder. There is a negative association 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 deprivation which result in dysfunctional attachment styles. Substances, as a compensatory effort, only lead to an aggravation of the situation through dependence and further deterioration of psychological and physiological structures (10). One of the substantial 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, individuals utilize various strategies

when faced with stressful situations (11). The results of many researchers including Basharpour (2012), Wu (2015), and Steiner and Van Waes (2013) disclose 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 (12).

Cessation of drug use is one of the issues that has always concerned the authorities, the drug abusers themselves and their families. Physical withdrawal from drugs is not extremely complicated, therefore the main problem is to return and initiate again this bad habit. Currently, there are no accurate statistics on the percentage of the treated persons return to drugs in Iran, but the number of drug addicts is increasing. Country's drugs can indicate that the treatment methods performed yet, have not been successful or comprehensive, regarding the regional differences in the thoughts, beliefs, and persons' opinions, the opinions of individuals suffering from drug abuse in any geographical region can be an effective way of knowing the causes of relapse among addicts of that region. Various types of research have separately identified the role of research variables in addiction susceptibility, however, the direct and indirect relationship of these factors with readiness for addiction has been less studied. By examining this research, more appropriate intervention and treatment programs can be developed. Finally, the main question of the current research is whether attachment styles influence addiction readiness through the mediation of cognitive emotion regulation in recovered addicts?

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

Main hypothesis: There is a relationship between attachment styles and addiction readiness through the mediation of cognitive regulation of emotions in addicts who quit.

1. Attachment styles are directly related to addiction readiness in recovering addicts

2. Attachment styles have a direct relationship with the cognitive regulation of emotions in

addicts who are quitting

3. Cognitive regulation of emotions is directly associated with addiction readiness in drug addicts who are quitting

Methods

This is an analytical-cross-sectional research. The statistical population included the addicts in recovery for 1 to 12 months, aged between 18 and 55 years in 1401. They were selected from 4 addiction treatment centers in Iran, Amol. The sample size was calculated according to Cochran's formula with $p = q = 0.5$, $d = 0.05$, $\alpha = 5\%$ and $z = 1.96$. Using stratified sampling (based on the number of individuals in 4 addiction treatment centers in Amal city), 300 questionnaires were personally distributed by the researchers among addicts with drug rehabilitation.

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

Measuring tool

Addiction potential scale (IAPS): The scale of susceptibility to addiction was developed by Wade and Butcher, McKenna, and Ben Poras (1992). The used version is the Iranian susceptibility scale created by Zargar et al. It includes 36 items and 5 lie detector items. Each item is scored from 0 (strongly disagree) to 3 (strongly agree). The total score is the sum of the individual scores (except for lie detector questions). The score ranges from 0 to 108, with higher scores revealing that the respondent was more prone to addiction.

Attachment style Questionnaire: Hazan and Shaver's (1987) attachment style test materials, it was made and standardized for Tehran University students. It includes 15 questions and three attachment styles: secure, avoidant, and ambivalent. The answers are presented on a 5-point Likert scale (1 strongly disagree to 5 agree). The

avoidant style questions range from 1 to 5, safe style from 6 to 10, and the ambidextrous style from 11 to 15. The minimum and maximum scores in the subscales are 5 and 25. In Besharat's research (2000), the Cronbach's alpha coefficients of the safe, avoidant, and ambivalent subscales for a student sample (1480 individuals including 860 girls and 620 boys) were reported to be 0.86, 0.84, 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 as 0.80, 0.61, and 0.75, respectively. In the present study, Cronbach's alpha was obtained in safe, avoidant, and ambivalent subscales as 0.73, 0.71, and 0.78 respectively.

Cognitive emotion regulation questionnaire (CERQ): The cognitive emotion regulation questionnaire was developed by Granfsky, Kraij

and Spinhaven (2001), which contains 36 items. It is scored on a five-point Likert scale from never to always. It consists of seven subscales of self-blame, other-blame, catastrophizing, rumination, refocusing on planning, acceptance, positive focus, and positive evaluation. The alpha coefficient for the subscales was reported by Granfsky et al. (2002) to be in the range of 0.71 to 0.81.

Results

The diagram of the structural equation model tested to verify the research hypotheses for the standard estimation mode and the significance mode is illustrated in the following figures.

The results of the research hypotheses test

Structural equation model and Sobel test applied to investigate this hypothesis. Table 1 reveals the results of the fitted model to check the research hypotheses.

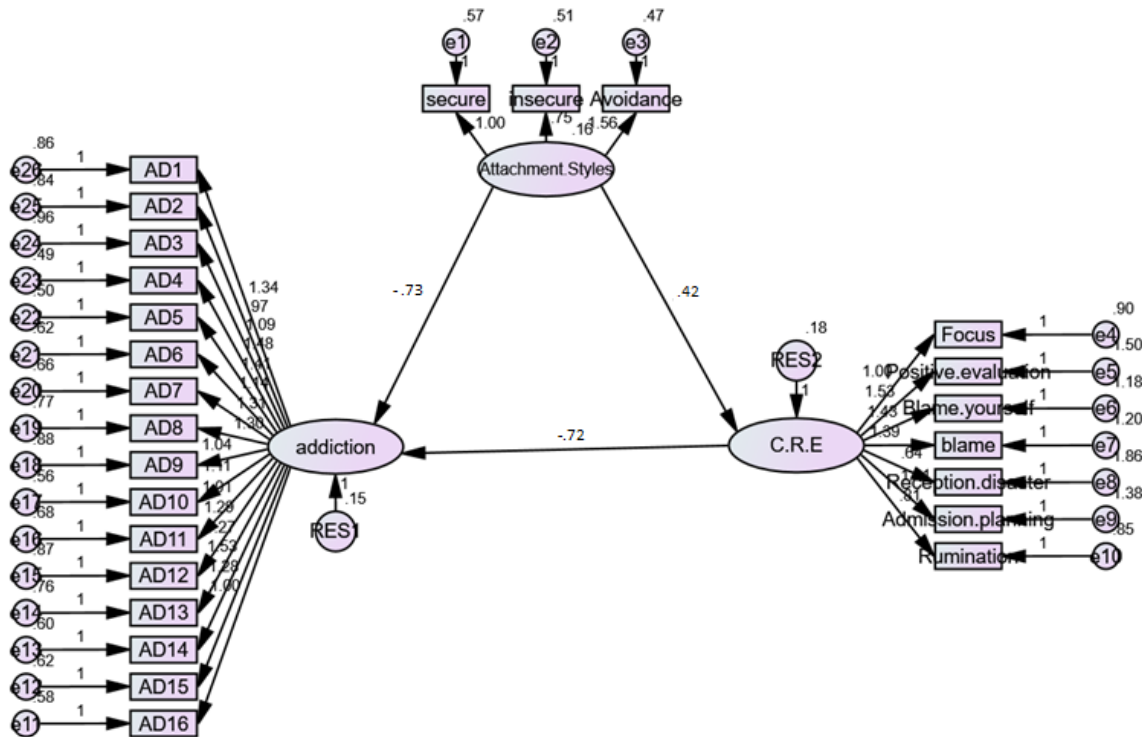


Figure 1. Structural equation model in the standard estimation mode

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	Readiness for Addiction	8.310-	-0.733	1.45	-5.729	0.0001
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

Based on the results of Table 1, it can be observed 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 utilized. The relevant test results are demonstrated in Table 2.

Table 2. The results of the Sobel test

Mediator	a	b	S _a	S _b	z-value	Sig
Cognitive regulation of emotion	0.392	-20.482	0.047	3.185	-5.092	0.0001

Based on the obtained result, the mediating effect of cognitive regulation of emotions in the influence of attachment styles on addiction readiness, the z-value is greater than 1.96 and the significance level is less than 0.05. On this basis, attachment styles on readiness for addiction are mediated by cognitive regulation of emotions in recovering addicts. There is an effect.

Discussion

According to the obtained results, it has been confirmed that "attachment styles influence addiction readiness by mediating cognitive regulation of emotions in addicts who quit." Based on the studies conducted, the results of this research are consistent with the findings 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 perceived that an individual's attachment level to those surrounding them influences their tendency to comply with approval requests. For instance, a person who prioritizes pleasing their close friends in order to maintain the position in the friend group may initiate consuming drugs if they are using. When a person manages their attachment effectively, they can make wiser decisions in vulnerable and abnormal circumstances, and they

do not believe that rejecting their loved one's wishes will diminish their intimacy level or dependence on them.

Individuals experience various emotions in their daily lives, and the absence 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.

Furthermore, the results confirmed that "attachment styles bear a direct relationship with addiction readiness in recovering addicts". In other words, with the changes in attachment styles, a person's readiness for addiction also changes.

Addicted persons who quit while using drugs find a kind of attachment to drugs according to John Bowlby's theory, when these persons are pressured to consume drugs, weak management of their emotions increases the risk of drug abuse. On the contrary, effective management of emotions is dangerous which reduces substance abuse. In order to justify the results of this hypothesis, it can be discussed that a person's attachment style will be the basis 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 person's development, based on their experiences with attachment figures and interaction with the material world, they create their inner active patterns. With regard to these patterns, a person perceives and interprets, predicts events, and builds plans (Hazan and Shiver, 1987). Attachment theory assumes that these active models are communication schemas formed as a result of the rules present in interactions with the original attachment manifestations, and it is inferred that attachment models are associated with old cognitive schemas or beliefs. We have an intimate relationship with ourselves and others which affects and is affected by interpersonal interactions. Consequently, the origin of the emergence of attachment styles and initially incompatible schemas lies in the child's experiences formed in the relationship with caregivers.

On the other hand, it was confirmed that "attachment styles have a direct relationship with the cognitive regulation of emotions in quitting addicts." In other words, with the modifications in attachment styles, the ways of cognitive regulation associated with the individual's emotions change as well. To explain the results of this hypothesis, it can be represented that a person's attachment styles are considered various in different life situations, and addicts who are quitting require to transform their attachment style with regard to the change in their addiction status. Several factors can result in emotional problems for addicts who are quitting. Factors that originate from individuals' personality and characteristics as well as the novel environment. The process of cognitive emotion regulation consists of all conscious and unconscious strategies which an individual utilizes to increase, maintain, or decrease one or more components of an emotional response, including experiential, behavioral, and physiological. Therefore, a modification in a person's emotional response in various situations will be observed by modifying the attachment style.

Moreover, the results revealed that "cognitive regulation of emotion bears 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 changes as well. To explain the results of this hypothesis, it can be determined that addiction, as 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. Addicts who are quit to control their emotions no longer use the methods they applied to control the emotions during addiction period, and in general, the type of emotions which a person experiences after addiction is distinct from the time prior to it. 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 in a case the person cannot regulate his emotions well, he will return to addiction and his lack of emotional peace and stability in He thinks it is the result of not taking drugs. Therefore, there is a relationship between the cognitive regulation of emotion and readiness for addiction.

Addicts who are quitting while using drugs detect a type of addiction to drugs based on John Bowlby's theory, when people are pressured to use drugs, poor management of their emotions intensifies the risk of drug abuse. Conversely, efficient management of emotions is hazardous which reduces substance abuse. The explanation for the results of this hypothesis is that a person's attachment style will be the basis of many personal and social behaviors. If a person is a drug addict, it will play a role in preparing him to become addicted.

Conclusions

The results of this research indicated that it is possible to utilize the results of these variables' effects in interventions and training in addiction treatment clinics according to the predictive power of cognitive emotion regulation variable in the effect of attachment styles on readiness for addiction.

Suggestions

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

- Cultivating conscious attention in addicted patients can be a method 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 experienced in the relationships. It is therefore recommended that attachment styles are regarded as assessing problems with emotion regulation. Patients should perceive that treating patients with severe insecurity due to anxious attachment may compromise the effectiveness of treatment.

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

- It is recommended that the addiction prevention programme should include teaching about the compromised strategies and how to manage the cognitive regulation of emotions in order to prevent avoid persons from progressing towards addiction.

Acknowledgments

As this article is not an intervention, it does not

have a code of ethics.

Conflict of interest

The authors declared no conflict of interest.

Funding

No funds, grants, or other support was received.

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. EB, 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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