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Investigating the relationship between experiential avoidance and addiction potential in college students: The mediating role of emotion regulation styles

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Abstract

Introduction: This study aimed to investigate the relationship between college students' experiential avoidance and addiction potential by mediating emotion regulation styles.

Materials and Methods: The statistical population of this descriptive-correlational study consisted of all undergraduate students at Kazerun Salman Farsi University in the academic year 2017-2018. 250 students were selected through a stratified sampling method from all colleges of the university. Then, they fulfilled Acceptance and Action Questionnaire (second version), Iranian Addiction Potential Scale and Affective Style Questionnaire. Data were analyzed using SPSS-19 and AMOS-21 software.

Results: The findings indicated that experiential avoidance predicts students' addiction potential directly and indirectly it can predict addiction potential through the emotion regulation styles but the mediator role was not confirmed by the emotion regulation styles titled as concealing and tolerance.

Conclusion: In order to prevent addiction among young people, it will be necessary to pay attention to reducing the experiential avoidance that can exacerbate adaptive emotional adjustment and reduce predisposing to addiction.

Keywords: Addiction, Emotion regulation, Experiential avoidance

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Introduction

In the recent decades, population has witnessed an increasing trend of addiction in the worldwide especially youth adults (1). The effect of substance abuse on individuals, families and communities is obvious, as it imposes high costs on economy every year. Given the widespread prevalence of addiction, it is now assumed that preventing people from substance abuse and addiction is easier than treating this disorder (2).

The basic question raised is that, in spite of the apparent disastrous complications of substance use, what factors lead people towards it? Addiction can be considered a physical, psychosocial disease, the incidence of which is influenced by several pre-addiction factors (3) called addiction potentials (4). Identifying these factors in the youth and students can be effective in controlling and preventing them from the disease.

Perhaps the most important factors predisposing individuals to addiction are psychological factors, so that they can affect other factors. One of the main characteristics of the tendency to substance abuse is avoiding the situations or stimuli that lead to anxiety recall, and is referred to as experiential avoidance. The immediate consequence of these efforts is the instantaneous release from the annoying state experienced by the individual, but in the long run, the intensity and duration of the annoying experiences become so much that the person is forced to limit his/her life and do anything to escape from these states (5).

Kashdan et al. (6) found that experiential avoidance had a greater relationship with negative emotions and coping problems. It is worth noting that the content and form of unpleasant inner events and experiences are parts of humanity and life in the present, and

are not necessarily problematic or ineffective (7). But the question is whether a restricted mental expression of an individual's emotional states may lead him/her to tend to use substances and thereby direct his/her emotions (8,9). The conducted researches showed that there were strong relationships between emotional regulation styles and psychological damage (10). The role of emotional regulation strategies has been investigated for a range of mental disorders, including substance abuse (11-14). Individual differences in emotional regulation styles may predict the onset of emotional disturbances when faced with emotional challenges.

Therefore, an important question is raised on the interest of individuals in the habitual tendency to use some styles of emotional regulation over other ones, especially if the preferred strategy does not have the desired result. Some people react to the onset of emotions by evaluating them as intolerable, and subsequently by avoidance or concealing of them. Concerns, suppression and other emotional regulation strategies are considered as avoidance strategies and an immediate release of negative mood. Emotion avoidance may lead to a contradictory increase in emotional experiences.

In general, the researches suggest that experiential avoidance and emotion regulation strategies are associated with abnormal events (15), because experiential avoidance is a harmful background and the basis for appearance of many problems which including personal injuries (16). Now, if it is faced with some problem in emotional regulation, and the ability to monitor, evaluate, and modulate emotional reactions, especially in terms of targeted behaviors is lost, it may be likely to affect the incidence of harm such as the trend in substance abuse and addiction (17). In spite of the primary

and indirect support in this regard, the lack of conceptual studies to highlight more precisely the relationship between experiential avoidance and the tendency towards addiction due to the mediating role of emotional regulation styles is more prominent than ever. To this end, the present study was carried out in response to the lack of a model for predicting students' potential for addiction based on the experiential avoidance variable and the mediating role of emotional regulation styles. Accordingly, the following conceptual model can be suggested as a possible model of the relationship between these variables:

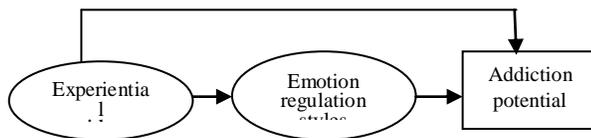


Figure 1. Conceptual research model

Materials and Methods

The statistical population of this descriptive-correlational study consisted of all undergraduate students at Salman Farsi University of Kazerun in the academic year 2017-2018. The procedure was followed by obtaining the necessary permission from the educational and research deputy of the Salman Farsi University of Kazerun to collect information. 250 students were selected through stratified sampling method from all faculties of the university (humanities, basic sciences, engineering and art) in an attempt to comply with the criteria of entry (voluntary and student participation). Exclusion criteria consisted history of admission to psychiatric centers and substance abuse disorder. The share of each of the educational subgroups was observed as the sample group. The final analysis was done on 235 questionnaires because 15 questionnaires were excluded due to incomplete fulfillment. It should be

noted that in order to comply with the principles of research ethics, participants were allowed to leave the research whenever they wished and to be included in the research process. Also, their information was kept confidential and pointed out to them that the requested information in the questionnaires was for research purposes only and there was no need to mention the first name. Participants were tested by the following tools.

Research instrument

A) Acceptance and Action Questionnaire-II (AAQ-II): The original version of this questionnaire, developed by Hayes et al. (18), included 9 questions which were scored on a 7-point Likert scale. The latest version of this tool contained 10 questions to be scored on a 7-point Likert scale, developed by Bond et al. in 2011. In this questionnaire, acceptance, experiential avoidance, and mental inflexibility were measured. In the study by Bond et al. (19), "experiential avoidance" and "control of one's life" were extracted, but as the Net Worth Ratio of the first factor was significantly different from that of the second one, and since the two factors were not different in terms of theoretical and conceptual basics, a single-factor structure, named experiential avoidance, was ultimately reported for this scale (20).

The validity and reliability of this version were higher than those of the original one and were related to the variables that predicted the theory of acceptance and action. Abbasi et al. (20) examined the psychometric adequacy of the Persian version of the questionnaire for the first time in Iran. After translating the questionnaire, they conducted their research on the students and reported the internal consistency and the split-half coefficient of satisfactoriness (-0.89 and 0.71). In their study, some promising evidence on applicability of the

Persian version of acceptance and action questionnaire in the Iranian population was provided. In the present study, the reliability of the questionnaire was obtained 0.77 using the Cronbach's alpha.

B) Affective Style Questionnaire (ASQ): The Affective Style Questionnaire was designed by Hofmann and Kashdan (21). The tool consisted of 20 questions to be responded based on the 5-point Likert scale, from "extremely true about me" to "not true about me at all". After translating and re-translating the questionnaire, Karshki (22) provided it to related psychologists and they confirmed its content validity. The questionnaire had three component or subscale of Concealing, adjusting and tolerance, about which there were 8, 7 and 5 questions, respectively. In Karshki's study, the Cronbach's alpha reliability of Concealing, adjusting and tolerance was respectively 0.70, 0.75 and 0.42 and the total reliability was 0.81. Moreover, to assess the validity of the scale, the Aggression Questionnaire (AQ) was used and the negative correlation coefficient obtained showed an appropriate divergent validity (22).

C) Iranian Addiction Potential Scale (IAPS): This scale was made according to the psychosocial conditions of the Iranian society, and consisted of two factors with 36 items as well as 5 lie detector items. In the first factor (active potential), most of the items were related to anti-social behaviors, desire to use substances, positive attitude towards substances, depression and sensation seeking, and the majority of items

in the second factor (passive potential) were related to lack of self-expression and depression.

To calculate the validity of this scale, external criterion validity and construct validity were used. In criterion validity, the addiction potential questionnaire had distinguished between the two groups of addicts and non-addicts. The construct validity of the scale was calculated to be 0.45 through correlation with the SCL-25 scale, which was significant at lower-than 0.001 level. The reliability of the scale was calculated to be 0.90 using Cronbach's alpha, and it was considered desirable (23). The scale validity in the present study was obtained by comparing the scores of substance-addiction potential of the students who stated they had experienced substance use and those who did not have such an experience, and a significant difference was found between the two groups.

The data were analyzed using SPSS-19 and AMOS-21 software.

Results

This study was conducted on 259 students (181 girls and 51 boys). The mean and standard deviation of the students' age was 19.31 years \pm 1.50. 21.7% of the participants were studying at the Faculty of Engineering, 30.2% at the Faculty of Literature and Humanities, and 48.1% at the Faculty of Basic Sciences. Table 1 shows the mean and standard deviation of the participants' scores based on the research variables.

Table 1. Descriptive Findings related to Research Variables

Variable		Mean	Standard deviation
Experiential Avoidance		32.50	9.77
Emotional Regulation Styles	Concealing	26.75	5.44
	Adjusting	26.01	4.54
	Tolerance	15.94	3.19
Addiction Potential		27.06	16.28

In order to analyze the statistical data, the statistical preconceptions such as normalized distribution of the variables scores and the

correlation coefficients between them were first examined, the results of which are reported in Tables 2 and 3.

Table 2. Skewness and kurtosis results to evaluate the assumption of normalized variables

Variable		Skewness	Kurtosis
Experiential Avoidance		0.13	-0.29
Emotional Regulation Styles	Concealing	-0.22	-0.30
	Adjusting	-0.38	0.18
	Tolerance	-0.05	-0.003
Addiction Potential		0.99	1.10

The results showed that the values of statistical skewness and kurtosis of the research variables ranged from -1 to 1. Therefore, the data were distributed optimally in this term. Regarding multicollinearity, variance inflation factor and coefficient of tolerance were calculated as well. The variance inflation factor values ranged from 1.50 to 2.06, which were lower than 10. Also, the tolerance coefficients ranged from 0.49 to 0.67, which were higher than 0.1. Thus, the multicollinearity

phenomenon did not occur in the research variables.

Table 3. Correlation coefficients of the research variables

Variable	1	2	3	4	5
1. Experiential avoidance	1				
2. Concealing style	-0.08	1			
3. adjusting style	-0.46**	0.48**	1		
4. Tolerance style	-0.18**	0.45**	0.50**	1	
5. Addiction potential	0.42**	0.16**	0.31**	0.24**	1

In order to respond to the research question and evaluate the proposed model fit, the structural model fitness indicators were estimated and evaluated. After the initial implementation of the given model, it was determined that the model was slightly different from the desired fit (Table 4). Therefore, considering the correction indices (modeling and arrangement) of the model, due to the undesirable significance of the relationship between the concealing style and experiential avoidance ($P > 0.05$), the relationship was eliminated and a covariance was established between the error related to the Concealing style and adjusting style (e1 and e2), the error related to the concealing style and tolerance style (e1 and e3), and the

error related to the adjusting style and tolerance style (e2 and e3), and the fitness indices of the model were promoted.

According to the finiteness indices of the final model shown in Table 4, the softened Chi square (χ^2/df) was smaller than 3, and the GFI, IFI and CFI indices were higher than 90%; in addition, RMSEA was smaller than 0.08, all indicating appropriate fit of the structural model with the data. As shown in Figure 2, in the final model, the concealing style was not considered as a mediator variable, but the adjusting and tolerance styles were considered as mediator variables.

Figure 2. Final model of research variables relationship

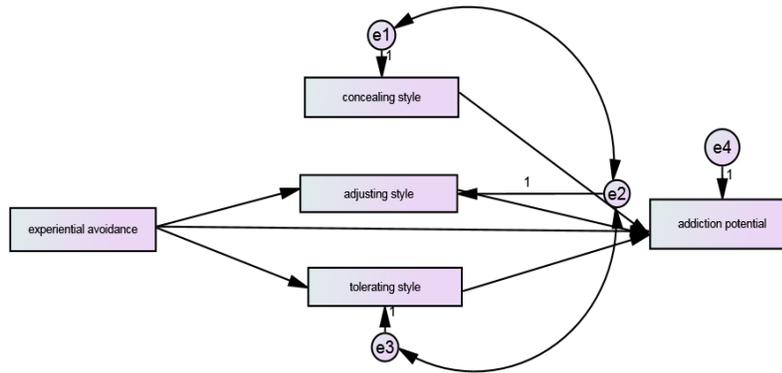


Table 4. Fitness index of the model

Fitness indices	χ^2/df	RMSEA	GFI	IFI	CFI
Initial model	48.77	0.45	0.9	0.4	0.3
Final model	1.44	0.04	0.9	0.99	0.99

Table 5. Effects analysis: Direct, indirect, and total standard effects of the model

Causal variables	Standard effects	Addiction potential	Adjusting style	Tolerance style
Experiential avoidance	Direct	0.43 ^{***}	-0.43 ^{***}	-0.15 ^{***}
	Indirect	0.10 ^{**}		
	Total	0.53 ^{***}	-0.43 ^{***}	-0.15 ^{***}
Concealing style	Direct	0.16 ^{**}		
	Indirect			
	Total	0.16 ^{**}		
Adjusting style	Direct	-0.31 ^{**}		
	Indirect			
	Total	-0.31 ^{**}		
Tolerance style	Direct	0.25 ^{**}		
	Indirect			
	Total	0.25 ^{**}		

P≤0.01 **

Based on the results in Table 5, the direct effect of experiential avoidance (0.43) on addiction potential was relatively high (P=0.001), the indirect effect of experiential avoidance (0.10) through emotional regulation styles was moderate and significant (P=0.004), and the total effect of

experiential avoidance on addiction potential (0.53) was high and significant (P=0.001). We used the Sobel test to determine the unique contribution of the two intermediate variables, adjusting and tolerance emotional regulation styles. The results of the Sobel test confirmed the mediating role of the

adjusting emotional regulation style between the experiential avoidance and addiction potential ($P=0.001$, $t=4.29$), but the mediating role of the tolerance emotional regulation styles was not confirmed ($P=0.24$,

Discussion

The aim of this study was to investigate the relationship between experiential avoidance and addiction potential through the mediating role of emotional regulation styles in students. The statistical results showed that among the three different emotional regulation styles, only the mediating role of adjusting style was significant. These results were consistent with the findings of Carcalla et al. (15), Graz and Roemer (17), Aldau et al. (10), and Schreiber, Grant and Odlaug (24). By definition, adjusting is a way of regulating the inner world through which the individual's emotional experiences are modulated and regulated according to the requirements existing in the context or surrounding environment (22).

It is logical that the effect of an individual's experiential avoidance on his/her addiction potential occurs through his/her emotional adjusting, because based on the findings of Mezzich et al. (25), avoiding the internalities along with weak emotion regulation is an important background for substance abuse. Thus, when an individual avoids the experience of different emotional waves arising in his/her inner world and does not process and pursue it - as observed in the high scores of experiential avoidance - in fact, s/he deprives him/herself of the opportunity to examine and challenge the emotions, and consequently, modulate them in harmony with the environmental requirements - as it can be seen in choosing the adjusting self-regulatory approach.

Undoubtedly, any defect in this inner regulation may drive the individual into the outside world and the interventions that can be used from outside to coordinate the inner

$t=1.16$). In addition, the results showed that experiential avoidance and emotional regulation styles could predict 37% of the students' potential to addiction.

world, or at least use them as a temporary relief. In this difficult situation, the person will lose the ability to solve problems and make right decisions, and will go towards non-adapted behaviors and anything that can disassociate him/her from confrontation with internal turbulences for a short time (26). Therefore, the findings of this research on the mediating role of adjusting emotional regulation style as an adaptive strategy in the relationship between individuals' experiential avoidance and the tendency towards addiction are justifiable.

Another finding of the present research was the lack of confirmation of the mediating role of confidential and tolerance emotional regulation styles. This finding is not consistent with those of the research by Simons and Gaher (27) and Trinidad et al. (28).

The concealing style is, by definition, the inhibition or strategies that help an individual to conceal his/her emotions intentionally after they are excited (22); hence, it is not usually considered as an effective strategy for regulation of one's internal emotions (29). But in a cultural context of collectivism such as Iran, where maintaining interpersonal relations are considered as one of the most important values of individuals, concealing of the emotions created in a person by communication with others might help to maintain interpersonal relationships (30). Thus, it is not necessarily expected that all the paths drawn by concealing emotional regulation would lead to a negative consequence such as the tendency to addiction. This is especially true for girls, who plan their main goals and behaviors

with a focus on maintaining relationships - and accounted for about 70% of our research sample - because in the process of socialization, women learn to easily express part of their emotions that act as a tool to express themselves even in primary childhood, and conceal much of their internal emotions that do not have a great impact on improving interpersonal relationships, or on the contrary, make a potential danger-albeit not necessarily - for such relationships (31). Therefore, the insignificance of the mediating role of concealing style in the relationship between experiential avoidance and addiction tendency was expected due to the cultural burden of the aforementioned style.

Such an explanation is also used in a different way about the tolerance emotional regulation style that did not play a mediating role in the present study. The tolerance style is a person's easy and non-defensive reaction to the emotions experienced in his/her inner world (22); a strategy through which a person throws his/her emotions out of his/herself like a flooding storm, and does not attempt to modulate them. Hence, it does not seem to be considered as an emotional regulation style during the socialization process.

The results of the present study concluded with an introduction of a pathway that begins with experiential avoidance and, through the mediating role of adjusting emotional regulation style, ends to addiction potential. The important focus is that the emotional structure of the youth is of great importance for preventing developing addiction among this age group, and experiential avoidance along with emotional regulation process can lead to a wide range of negative outcomes, one of which is the tendency towards addiction.

References

The results of this research should be interpreted in the light of its constraints. First, this study was conducted on students with a relatively homogeneous population; therefore, there is a limitation to generalize to other populations. Another limitation is the cross-sectional nature of this study, which inhibits causal inferences and precisely recognizes the true nature of relationships between research variables. Finally, in this study, only one measure of self-measurement was used to evaluate each of the variables. Using various measurement methods can help improve the meaning of the variable. Since this research has been done in relation to university students, it is suggested that the variables of the present study in early-adolescent high school students who are experiencing a very active developmental period or in non-undergraduate population also should be considered. In addition, it is suggested that higher sample sizes be used in future studies to examine the role of intermediation of different emotional regulation styles in relation to the two variables of addiction potential and experiential avoidance for males and females separately.

Conclusion

In order to prevent addiction among young people, it will be necessary to pay attention to reducing the experiential avoidance that can exacerbate adaptive emotional adjustment and reduce predisposing to addiction.

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