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The Role of Anxiety Sensitivity and Attentional Control in Predicting the Tendency To Addiction in Youth

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Abstract

Objective: The present study aimed to investigate the role of anxiety sensitivity and attentional control in predicting the tendency toward addiction in youth.

Method: The present study is correlational and 150 students were selected as participants of study through multistage cluster sampling. The attentional control questionnaire (Derry berry & Reed, 2002), Anxiety Sensitivity (Peterson & Reiss, 1987) and the Readiness Scale for Drug Abuse (Zargar, 2007) questionnaires were used to collect data. The research data were analyzed through Pearson Correlation Coefficient formula and regression.

Results: The results showed that there is a significant correlation between attentional control and the lack of cognitive control with the tendency to addiction.

Conclusion: According to the findings, it can be concluded that in addition to social and biological factors, psychological factors, such as attentional control and anxiety sensitivity, are influential in the tendency and readiness of individuals to drug addiction.

Keywords*:* Attentional control, Anxiety sensitivity, Tendency to addiction, Students, Health

Introduction

There are many theories about the tendency to drug use and dependence on it. The majority of theorists argue that substance use disorder is a multidimensional problem, i.e. several factors, such as biological, psychological, social and spiritual factors contribute to it. Addiction is a recurring and chronic mental illness that leads to severe motivational disorders and a lack of behavioral control (Oraki. 2019). According to world reports, the start of addiction began at the age of 16 and is still decreasing (Esmaili, Mashayekh, & Eslami, 2018). The results of other studies indicate the effect of family, school, friends, mass media, and presence of anxiety disorder or night parties as possible causes of tendency to substance use. Although the substance use disorder is a global problem, researchers believe that solutions to this problem are different based on the conditions of each region, persons at risk and risk factors (Lancet, 2012). Precise statistics on the number of drug dependents in Iran are not available, but the results of the research indicate a high level of addiction and health issues among youth (Esmaili et al., 2018). Anxiety sensitivity is one of the traits associated with personality, which is also considered today in addictive behaviors. Anxiety sensitivity is the fear of anxiety-related emotions in which a person is afraid of a body of symptoms (increased heart rate, asthma, and focus problems) associated with anxiety arousal, and it is believed that these symptoms lead to potentially harmful social, physical and cognitive outcomes in people with anxiety disorders compared to healthy individuals (Ino et al., 2017). Anxiety sensitivity is widespread in the general population and includes the risk of developing various types of psychological problems (Albanese et al., 2018). Anxiety sensitivity

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acts as an anxiety booster. When individuals with high levels of anxiety tend to experience anxiety, they start to take a catastrophic interpretation of their inner feelings and worry about it, as a result their anxiety intensifies and increases (Ghisi et al., 2016). Anxiety and anxiety sensitivity reduces the central available executive capacity. Evidence of psychopathology suggests that attentional control, which is one of the most important factors of executive function, has a significant role in substance use and relapse. Failure to control attention and attention bias causes individuals to continue or return behavioral problems. High anxiety and anxiety sensitivity increase the focus of attention on stimulus associated with the threat and usually reduce focus and attention on the current work and disrupt attentional control. Individuals with high anxiety sensitivity prefer to devote their attention to stimulus-related and internal or external threats (Eysenck, Derakshan, Santos, & Calvo, 2007). Theoretically, anxiety sensitivity exacerbates the negative affect and, as a result, increases the motivation for substance use, which may be a factor in starting it from adolescence (Ghisi et al., 2016). Many people with anxiety disorder show the patterns that prioritize the processing of potentially threatening information, which may mean that they spend more time focusing on this information or avoiding it by shifting their attention to them; it is thought that the allocation of attention resources in this way contributes to the development and persistence of anxiety (Barry, Sewart, Arch, & Craske, 2015). The high level of anxiety is often associated with the low level of attention and consequently, low performance. The theoretical hypothesis that disrupts the attention control can be attributed to the fact that there are two systems of attention, Goal-Directed Attention System, which is influenced by current objectives and targets, and Stimuli-Driven Attention System, which responds to obvious and outstanding stimuli (Eysenck et al., 2007). Attentional control is one of the facets of the executive functions and indicates the ability to act consciously and pay attention to a particular stimulus or to shift from it, and poor attentional control is a risk factor because individuals with poor attentional control can hardly keep their attention away from the threatening stimulus (Albanese et al., 2018). In particular, attentional control involves the ability to focus and shift attention as needed, flexibly attend to particular tasks or goals, and shift between mental sets (Rudolph, Monti, & Flynn, 2018). Within the context of performance-based tasks, attentional control involves switching one's attentional set to respond to new information (Banich, 2009). Within the context of everyday life, attentional control may play a role in youths' broad capacity to control thoughts, emotions, and behaviors by helping maintain attention to or switch attention between tasks and activities in order to self-regulate and adapt to current contextual demands (Rudolph et al., 2018; Rueda, Checa, & Rothbart, 2010). Defective attentional control is used in determining clinical and non-clinical anxiety (Forcadell, Torrents-Rodas, Treen, Fullana, & Tortella-Feliu, 2017). Attention and attentional control are two main constructs related to emotion regulation and are considered as emotional adjustment strategies in anxiety and mental disorders. The emotion regulation process model claims that individuals regulate their emotions in the sequence of situation-attention-assessment-response and attention deployment is an emotional adjustment strategy for the development and maintenance of emotional disturbances (Abasi, Mohammadkhani, Pourshahbaz, & Dolatshahi, 2017). According to the theory of attention control, anxiety results in the destruction of the balance between these two goal-directed and stimuli-driven systems, and subsequently increases the effect of the stimuli-driven attention and reduces the effect of goal-directed attention. When anxiety and anxiety sensitivity are at a high level, its destructive effect will also increase and thus disrupts the control of attention and function of shifting attention (Eysenck

et al., 2007). Individuals with less emotional attention control may not be able to shift attention to the other features that may facilitate the return of fear and anxiety when dealing with the same stimuli (Forcadell et al., 2017). Substance use disorder and dependence on it is particularly important among teenagers and adults because of the sensitivity of this period and its role in the future life; it is not unusual for young individuals to show emotions such as depression, irritability, and impulsivity, also environmental pressures have various effects on them. Youth often deal with a lot of social pressures and concerns that it may affect their self-esteem and sense of identity. In this period of life young people seeking to get away from anxious thoughts and most of them have not attention control in this situation, as a result, it is possible to choose drug as an option to get rid of these conditions.

Objectives

The present study aimed at answering the question of whether anxiety sensitivity and attentional control anticipate the tendency to addiction in youth or not.

Methods

The present study is fundamental and descriptive based on the purpose of the research and in terms of data collection, which was done within the framework of a correlation protocol. The statistical population of this study was the students of Azarbaijan Shahid Madani University in the first semester of the academic year 2018-2019, in which 150 students were selected through multistage cluster sampling in which some faculties were randomly selected from the faculties of the university and questionnaires were distributed among students with the consent of the subjects.

Measures

3.1. Attention Control Scale (ACS)

The ACS is a 12-item self-report measure of the general ability to flexibly control and direct attention. Items on the ACS are rated on a Likert scale from 1 (almost never) to 4 (always), and higher scores indicate better attention control. The ACS has demonstrated good discriminant, convergent, and predictive validity (Derryberry & Reed, 2002), and adequate internal consistency (α= .85) in the present sample study.

3.2. Anxiety Sensitivity Index (ASI):

The Anxiety Sensitivity Index includes 16 items that assess fear of anxiety and related sensations that are rated from 0 (‘‘very little’’) to 4 (‘‘very much’’). The structure of the questionnaire consists of three factors: fear of bodily concerns (8 questions), fear of lack of cognitive control (4 questions) and fear of observing anxiety by others (4 questions). The correlation coefficients were satisfactory and ranged between “0.74 to 0.88” (Peterson & Reiss, 1987), It demonstrated adequate internal consistency (α=91) in the present sample study.

3.3. Iranian Addiction Potential Scale (IAPS):

The Iranian Addiction Potential Scale (IAPS) was developed by Weed and Butcher (1992), and some efforts have been made in Iran to assess its validity. In the present study, we use the Iranian version of this questionnaire developed by Zargar, which is based on the psychosocial characteristics of Iranian society. Testing for criterion validity showed that this scale can properly differentiate between addicts and non-addicts. This questionnaire consists of 36 items, and 5 lie detector items and rated on a Likert scale from 0 (Strongly Agree) to 4 (Strongly Disagree). A significant correlation was found between this scale and the SCL-25 that supports the construct validity of the IAPS (Zargar, 2007). The internal validity of this scale in the present study was 0.91.

Results

A total of 150 students were selected from the research population, out of which 5 students were

removed due to incomplete questionnaires and outliers; therefore, the final study sample included 145 participants, 77 girls and 68 boys. The descriptive statistics of the demographic variables of the studied group are presented in Table 1.

To test our hypotheses, multiple regression analysis was used simultaneously. Before performing the analysis, the regression assumptions were examined, the sample size is sufficient using the formula N>50+8m, and according to table 1. The descriptive statistics of the variables are presented in Table 2.

One of the hypotheses of the regression is a normal distribution of variables, which was normalized concerning the skewness and kurtosis in the above table, which was in the range of (-2, 2).

As shown in Table 3, the correlation coefficients of fear of lack of cognitive control, fear of observing by others, fear of bodily concerns (0.571, 0.508, and 0.536), are significantly correlated at 0.05 levels with attention control. Also about attention control, the correlation coefficient is equal to 0.584, which indicates a significant relationship at the 0.05 level with a tendency to addiction. To investigate the predictive role of anxiety sensitivity, attention control and tendency to addiction, multiple regression was used *simultaneously. The results are presented in Table 4.*

The Durbin-Watson statistic has been used to assess the independence residuals correlations to examine another regression hypothesis, which is optimal according to the results obtained in Table 4. Also, according to table 4, there is a significant correlation between attention control and the fear of lack of cognitive control with a tendency to

Table 1: The descriptive statistics of the variables

Gender	Frequency	Frequency. P
Girls	77	53.1
Boys	68	46.9
Total	145	100

Table 2: Descriptive Statistics of the variables

variables	Mean	SD	Skewness	Kurtosis
Tendency to addiction	44.6828	20.30863	0.915	0.294
Attentional control	30.7448	6.27913	-.0101	-.0355
Fear of observing by others	8.5724	2.83761	0.657	-0.238
Fear of bodily concerns	14.8483	6.57577	1.188	1.130
Fear of lack of cognitive control	9.3034	3.03527	0.434	-.0590

Table 3: The correlation matrix of the studied variables

variables	Tendency to addiction	Attentional control	Fear of lack of cognitive control	Fear of observation by others	Fear of bodily concerns
Tendency to addiction	1	-	-	-	-
Attentional control	-0.584	1	-	-	-
Fear of lack of cognitive control	0.654	-.0571	1	-	-
Fear of observation by others	0.528	-.0508	0.715	1	-
Fear of bodily concerns	0.601	-.0536	0.753	0.649	1

Table 4: Summary of the model and the regression coefficient of the tendency to addiction based on attentional control and anxiety sensitivity

Predictor variables	Standard β	T	P<	Adjusted R2	F	Durbin Watson
Attentional control	-.0281	-3.785	0.001	0.493	36.055	1.982
Fear of lack of cognitive control	0.342	3.3	0.001			
Fear of observation by others	0.028	0.315	0.753			
Fear of bodily concern	0.175	1.856	0.065			

addiction at level 0.05, which are equal to 0.000 and 0.001.

Discussion and Conclusion

The purpose of this study was to investigate the predictive role of anxiety sensitivity and attention control in predicting tendency to addiction in young individuals. According to table 4, 0.49 percent of variations in the dependent variable (tendency to addition) are explained by independent variables of attention control and one of the components of anxiety sensitivity (lack of cognitive control). In the first hypothesis of the study, the role of anxiety sensitivity in the prediction of addiction tendency was investigated; the results indicated that increase in the lack of cognitive control, one of the components of anxiety sensitivity, in the prediction of a tendency to addiction in youth has an effective role. And in the second hypothesis of this study, the role of attention control in the prediction of a tendency to addiction was investigated, which showed that lack of attention control also plays an effective role in preparing youth addiction. These findings are similar to the results of the Derryberry and Reed, which found that students with low attention control and high anxiety sensitivity had a higher rate of deviation for negative and threatening targets; they also concluded that anxious people with high level of attention control focused on threatening targets (Gagne, O'Sullivan, Schmidt, Spann, & Goldsmith, 2017). According to Vujanovic and colleagues', anxiety sensitivity may be associated with post-traumatic stress disorder and substance use through several key methods. First, anxiety sensitivity mediates the relationship between post-traumatic stress and drug use. With an increased propensity for fear of anxiety resulting from anxiety to deal with negative emotional states associated with PTSD, they may be at increased risk of developing or maintaining substance use. Secondly, anxiety sensitivity may provide a platform for people with substance use disorder that have potentially experienced life-threatening events and due to sensitivity to anxiety-related feelings, they may be more associated with substance use. Anxiety sensitivity may also increase the vulnerability to relapsing and returning to the substance use, or maintain the symptoms of PTSD and increase the internal and external damage caused by anxiety-related feelings. Discrepant with the findings of this study is a study of temperament which indicates that people with higher attention control and higher executive performance ability show more anxiety (Vujanovic et al., 2018; White, McDermott, Degnan, Henderson, & Fox, 2011). In general, according to the results of this study and literature, the function of anxiety sensitivity as anxiety enhancement, can lead to the use of any psychotropic drug and may increase individual's potential for drug use, because it puts an individual in a negative emotional state and exacerbate the person's negative affect, and thereby increases the negative reinforcement for substance use. By reducing attention control in individuals as well as increasing anxiety sensitivity, individuals receive stressful situations extremely through their emotions and thoughts, and in a state of exaggerated readiness, they encounter severe anxiety responses and inability to control their attention to stressful situations, and over time, attention is limited to sources of threat or risk, and since cognitive resources at this time are limited due to cognitive filtering, one might be reluctant to escape from this position by avoidance behaviors such as substance use, as a mechanism for modulating negative emotions. These findings, however, encountered some limitations. Using the correlation method and the lack of determination of causal relationships among variables is one of the constraints of this study. The study has been done on university students in Tabriz and cannot be extended to other cities and other groups. It is suggested that in the future, the role of predictors of these variables on other age groups is also

investigated, and researchers in their studies use effective intervention as mindfulness with targeting attention control and anxiety sensitivity. Finally, it is suggested to educators in the country to provide educational packages and special education from childhood and adolescence in reducing stress and anxiety and methods to increase attention control to reduce future health problems.

Ethical approval:

This research is not conducted as a clinical trial and it does not need any ethical code, also the identities of the participants in this investigation were ethically confidential.

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