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The relationship between neuroticism and life expectancy with addiction potential tendency in male high school students

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Abstract

Introduction: Addiction to narcotics is one of disasters that threatens humans' life especially adolescents. In addition, narcotic abuse is related to many dangerous behaviors such as destroying the private properties, increasing the violence and treacherous sexual behaviors and infectious diseases like AIDS, increasing mental disorders and suicide thoughts. The aim of the current research was to analyze the relationship between neuroticism and life expectancy with addiction potential tendency in male high school students.

Methods: Research subjects were 242 male students that were chosen from 13 high school students in Anbarabad city. In order to gather data, NEO Five-Factor Inventory (NEO-FFI), Snyder's life expectancy questionnaire, and Vide and Bucher's addiction potential tendency questionnaire, were used. Data were analyzed using Pearson correlation methods and regression analysis.

Results: Findings showed a negative and significant relationship between life expectancy and addiction potential tendency. Also, there was a significant positive relationship between neuroticism and addiction potential tendency ($P<0.001$). Life expectancy predicted 31% and neuroticism 42% variance mark of addiction potential tendency.

Conclusion: Based on the results, it can be concluded that decreasing neuroticism and increasing life expectancy can be a protecting shield against addiction potential tendency.

Keywords: Addiction potential tendency, Neuroticism, Life expectancy

Introduction

Addiction to narcotics is one of disasters that threatens all humans especially adolescents. Researches show that many societies suffer from drug abuse and this is more paramount among youngsters and adolescents in comparison to other groups (1). This situation is more considerable in Iran as it is bordered with Afghanistan and Pakistan for about 200 kilometers. These two countries produce more than 3500 tons of narcotics annually. Thus, on account of these matters, Iran with an almost a young generation is more susceptible to narcotic abuse among its young generation. Current statistics show that almost 14% of addicts are less than 19 years old and 28% of peo-

ple have a tendency toward addiction between 20 to 24 years old (2). Adolescence is a critical period in which profound physical and mental changes occur in individuals. In this period, adolescents are fragile due to their immaturity and as they have little experience they can be easily influenced (3). On the other hand, narcotic abuse is related to many dangerous behaviors such as destroying the private properties, increasing the violence and treacherous sexual behaviors and infectious diseases like AIDS, increasing mental disorders and suicide thoughts (4). Therefore, there are many reasons to investigate the facts that lead to an inclination toward narcotics. Some of them can be genetic, personality aspects, peer pres-

sure, negative family role models, and intense stressful incidents (5). Among the studies conducted on drug dependence, most of them have focused on personality aspects of individuals. In these studies personality features were considered as factors driving the person to addiction (6,7). Personality features defined as structural differences among individuals are hypothesized stable during situations and related to performance in cognitional tasks (8). Considering this special category clarifies individuals' performance in different scopes. Neuroticism is one of the five great personality factors defined with features like provocation, irritability, distraction, feeling helplessness, and prone to suffer from mental damages such as anxiety, depression, and anger and other disturbing consequences. People with this condition of personality have more irrational thoughts, less control over actions and fragile relationship with others. They have a critical assessment of themselves and choose primitive goals and evaluate their performance in inappropriate way (9). Hence, considering this aspect of personality in addiction potential tendency seems necessary. In addition, according to researches, addiction processes are influenced by beliefs and attitudes. Some studies indicated that individual's attitudes conform to their emotional and cognitional responses (10). For instance, ineffective attitudes, namely, prejudiced hypotheses and beliefs that a person has about himself/herself, the environment and future, (11) can play a role in showing the non-adjustment behaviors like addiction.

In this regard, positive attitudes and having hopes can play a key role in protecting from non-adjustment behaviors like addiction. In fact, hopefulness means teeming with energy to live and make the life better (12). Lopez et al state that the power of hope as a motivational force, has been discussed through centuries and medical and psychological pioneers have analyzed it (13). Therefore, it seems necessary to prevent the inclination to drugs by adolescents; considering the relationship between variables that play a pivotal role respectively. We aimed to investigate the relationship between neuroticism and life expectancy with addiction potential tendency in male high school students in Anbarabad.

Methods

In this correlational type research all male high school students who were graduating in 2014-15 constituted the study sample. Among 671 students in 13 high schools in Anbarabad city, only 242 students were selected as the sample in random method according to Morgan table.

Measuring tools

NEO personality inventory

NEO personality inventory (NEO-PI) is a psychological personality inventory to measure the Big Five personality traits. The revised NEO personality inventory (NEO-PI-R) questionnaire used by McCrae and Costa in 1985 consists of five personality traits and 60 questions. The questionnaire includes: neuroticism (12 questions), extra-

version (12 questions), openness to experience (12 questions), agreeableness (12 questions), and conscientiousness (12 questions). This questionnaire was developed for use with adult men and women without overt psychopathology as well as younger ages.

The questions are answered on a five point scale ranging from "strongly disagree" to "strongly agree". It is important to mention that questions number 12, 9, 8, 3, 15, 14, 16, 18, 23, 24, 27, 28, 29, 30, 31, 32, 33, 38, 39, 42, 43, 44, 45, 46, 48, 54, 55, 57, 59 are scored reversely. Grossi Farshi calculated the reliability coefficient of NEO questionnaire by Cronbach's alpha method for every personality trait (neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness) at 80.88, 79.0, 76.0, 0.0, and 0.83 respectively. NEO Five-Factor Inventory (NEO-FFI) questionnaire has been normalized in Iran in 1998 by Grossi Farshi (14).

Snyder's life expectancy questionnaire

This questionnaire was developed by Snyder et al in 1991 to measure the level of hope in life (12). This self-evaluation questionnaire has 12 items in which 4 items are to assess the factual thinking, 4 items to measure the strategic thinking, and 4 items are deviant. This inventory consists of two dimensions namely pathway and strategy. The validity and reliability of this questionnaire has been approved by many researches. The internal similarity of operating subscale is 0.71 to 0.76 and strategic subscale is 0.63 to 0.80. In addition, there are a lot of data about simultaneous validity of expectancy questionnaire and the items that it can predict. For instance, the solidarity of this questionnaire with the questionnaires of optimism, the expectation of achieving the goal and self-esteem is 0.50 to 0.60. The correlation of this questionnaire with the hopelessness one and the depression questionnaire is equal to -0.51 and -0.42 respectively, indicating the validity of this questionnaire (15).

Addiction potential tendency scale

The inventory of addiction potential scale was developed by Weede and Bucher in 1992 (16). This inventory is used to evaluate addiction potential and its coefficient reliability has been measured. This questionnaire is the Iranian measure of readiness to addiction that Zargar has created by considering the psycho-social situation of Iranian society. This questionnaire includes 2 factors, 36 articles and 5 of lie detectors.

Answering to this inventory is based on Yes or No responses. Two methods were used to calculate the reliability of this scale. The criterion reliability of capability to addiction questionnaire has distinguished two groups of addicted people and nonaddicted ones. The reliability of scale structure has been calculated as 0.45 through correlating with the 25-article scale of clinical signs' list (scl-25) that was significant at the level of 0.001. Scale reliability was calculated as 0.9 by Cronbach alpha which is proper (16).

The method of data analysis
To analyze data, SPSS version 18 and statistical tests of correlation matrix and regression were applied appropriately.

Results
Table 1 show mean and standard deviation of neuroticism and life expectancy with addiction potential tendency. According to Table 2, there was a significant positive relationship between neuroticism and addiction potential tendency ($r = 0.53$) at 0.99. We could also observe a significant negative relationship between life expectancy and addiction potential tendency at 0.99 confidence level.

According to Table 3, the results of stepwise regression indicate the prediction of addiction ability that life expectancy explains 31% of the variance of tendency to addiction's marks. Therefore, life expectancy ($\beta = -0.55$, $P < 0.001$) has a significant negative relationship with addiction potential tendency and it predicts the negative inclination to addiction. Neuroticism also clarifies 42% of variance of tendency to addiction's marks. Thus, neuroticism ($\beta = 0.36$, $P < 0.001$) has a significant positive relationship with addiction potential tendency and it predicts the inclination to addiction.

Discussion and Conclusion
Findings of this research indicate that there is a significant relationship between neuroticism and life expectancy regarding an inclination to addiction (Table 2). In this regard, neuroticism and life expectancy predict the inclination to addiction. To clarify these findings, it can be said that the power of hope as a motivational force has been discussed by medical and psychological pioneers. In Snyder's view, hope is a kind of mental process and it has two parts including operating thought (purposeful free wills) and ways (purposeful patterns) which are essential in forming and determining hope scale through purposeful behaviors and lead to adjustment and physical and mental health. Jackson and Weiss M Lundquist in 2003 concluded that hope has direct relationship with adjustment performances like the capability social communication, cognitional conformity, physical health and the skill of problem solving (17).

It can be said that these factors will protect the person as a supporting shield from the tendency to drugs.

Ways are the cognitional parts of hope and they show the person's ability in creating reasonable patterns in order to achieve the goals. Operating thought is the motivational part of hope and it shows the personal conception about the ability in reaching the past, present and future aims. Operating thought means to believe that the person can move to a certain goal through hypothetical ways and achieve it. Especially while confronting with obstacles, operating thought is important in implementing the motivation needed for stepping in other ways. Thus, the person involves less in defeat and hopelessness and the possibility of inclination to drugs to run away from difficulties decreases.

Furthermore, having a meaningful life and being hopeful enhances joy, consent of life, positive emotions and reduces the depression in people (18). This keeps people away from deviant behavior like abusing drugs. Findings also indicated that the relationship between neuroticism and addiction potential tendency was significant (Table 2). Some researchers believe that neurotic people are dragged more to drugs, and they are more likely to be affected rather than their opposite personality type that are the stable ones (19,20). People with neuroticism, are usually anxious, fearful, and often feel lonely and marooned. These people possibly have irrational thoughts and are less powerful in controlling the present condition.

Also, these people show weaker grade of adjustment to others and mental stress conditions (21) that these features in people having the nature of neuroticism, make them capable of addiction.

Ethical issues
This study was approved by the Neuroscience Research Center, Institute of Neuro pharmacology of Kerman University of Medical Sciences and supported.

Authors' contributions
All authors equally contributed to the writing and revision

Table 1. Mean and standard deviation of neuroticism and life expectancy with addiction potential tendency (N = 242)

	Mean	Standard Deviation
Addiction potential tendency	108.12	6.73
Neuroticism	27.4	9.29
Life expectancy	102.2	24.47

Table 2. The results of correlation matrix between neuroticism and life expectancy with addiction potential tendency

Variable	Addiction potential tendency	Neuroticism	Life expectancy
Addiction potential tendency	1		
Neuroticism	0.53**	1	
life expectancy	-0.55**	-0.39**	1

**(P < 0. 01).

Table 3. The results of step by step regression of neuroticism and life expectancy with addiction potential tendency

	Predictors	Dependent variable	F	P	R	R²	β	T	P
Step 1	Life expectancy	Addiction potential tendency	52.04 (1, 240)	0.001	0.55	0.31	-0.55	-7/21	0.001
Step 2	Neuroticism		42.36 (2, 239)	0.001	0.65	0.42	0.36	4.78	0.001

of this paper.

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