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A Comparative Study of Emotional Dimensions of Personality in Stimulants and Opioids Users

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Abstract: *Background and Objective: Drug addiction and substance abuse have become a psychological social problem that seriously threatens the various countries and societies. The purpose of this study was to compare the emotional dimensions of personality in stimulants and opioids users.*
Method: The research sample consisted of two groups of stimulants and opioids users consisted of 150 people (each group was 75 people) were selected by targeted and convenience sampling method and responded to the psychological emotional personality scale.
Results: The results showed that there was a significant difference in the dimensions of novelty seeking, harm avoidance, persistence, cooperation, self-directedness self-transcendence in stimulants and opioid users, and in all of the above scales, the mean scores obtained in stimulants was higher than the opioids.
Conclusion: These results indicate that addicted people show deficiencies in emotional cognitive regulation, which can be effective in preventing and treating addiction.

Keywords: *Emotional dimensions; Personality; Addiction; Stimulants; Opioids.*

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Introduction

Today, the problem of drug abuse is one of the four global and major social crises in the country, which has close relation with the economic and cultural aspects. Although, social factors in drug addiction are emphasized a lot, but abuse can be attributed to biological, psychological, and personality processes. Personality refers to all the traits and features including thought, feelings, self-perception, views, thoughts, and many habits that represent one's behavior and actually refer to a particular aspect of the whole human personality Addicts' personality traits are not just due to opioids, but addicts have had a number of psychological and personality disorders prior to addiction that have become more destructive after the addiction. So the problem of addicts is not just opioids, but in essence, the relationship between personality and addiction is discussed, and in fact, some people's personality structure is more conducive for accepting addiction than others. Many researches shows that emotional instability is the axis of the dysfunction in personality disorder and one of the signs of specifying it (Robbins, Keng, Ekblad & Brantley, 2012; Bornovalova et al., 2008). People with this disorder show greater frequency and severity in the emotions surveyed by self-assessment questionnaires (Linehan et al., 2007; Jacob et al., 2008). Various studies emphasize irritability (Links and Heslegrave, 2000), anger (Jacob et al., 2008) and shame (Gratz, Rosenthal, Tull, Lejuez & Gunderson, 2010), stress and anxiety (Stiglmeyr et al., 2005), fear (Arntz Klokman & Sieswerda, 2005), and total negative emotions (Walters, 2006).

Based on the evidence from effective brain systems that are divided into six distinct groups, it has been assumed that a great deal of personality variation can be attributed to the strengths and weaknesses found in these six systems. This hypothesis provides more evidence for the physiological bases of personality if proven (Panksepp, 2004). Also, Davis, Panksepp and Normansell (2004) provide a tool called Affective Neuroscience Personality Scales (ANPS). The tool is used to measure six core emotions that according to them is "core" elements defendable from emotional experience of "happiness, curiosity, emphasize, phobia, discomfort and anger".

Stimulants such as amphetamine, dextroamphetamine, and methylphenidate are a group of synthetic or plant-derived substances that increase alertness, arousal, and vigilance by stimulating the central nervous system. Stimulants by affecting the brain's reward center create pleasurable effects such as euphoria. These effects are in the consumer that led to

dependence. These substances cause energy and happiness in the consumer. The members of this group do not have high physical addiction but their consumption is associated with psychological addiction and many physical effects. (Mennin & Farach, 2007).

In contrast, opioids are substances derived directly from poppy sap or artificially produced from this substance and are the most common illicit substances used in Iran. Opium is a poppy-dried sap that is the source of a variety of addictive substances, including burned, sap, morphine, codeine, diphenoxylate and heroin. The physical effects of these substances include the feeling of heat and red face, pupil narrowing, dizziness and lethargy (Sharp et al., 2014). Behavioral disorders, feelings of joy and pleasure followed by depression and bad temper. Mental retardation, restlessness, disorder in memory and concentration, disorder in judging are the psychological effects of drug use. According to the World Health Organization, methamphetamine use is the most abused drug in the world after cannabis. Currently, there are approximately 26 million regular users of amphetamine versus 16 million heroin users and 14 million cocaine users worldwide (Tomko, Trull, Wood & Sher, 2014).

In the studies of Allen, Moeller, Rhoades and Cherek (1998) and Fisher et al. (2006), it has been reported that regarding drug abuse disorders, personality features such as impulsive, impulsivity, emotion seeking and restriction and prone to social deviations can expose the person to these disorders. In addition, heroin and alcohol abusers had higher levels of vulnerability associated with internalizing relative to the control group. On the other hand, Conway et al., suggested that restriction factor (one of other features of personality) can well distinguish opioids and cocaine users (low restriction) from marijuana and alcohol users (high restriction).

In this regard, according to the findings of Ketabi, Maher and Borjali, (2008), the level of novelty seeking and harm avoidance of addicts is higher than non-addicts, while self-directedness and cooperation in opioids users is lower than normal people. Also, Sarvela and McClendon (1998) in a study on addicts in Manchester found that four factors of access to opioids, risky occupation, and pressure from friends and colleagues had a significant relationship with addiction, and in another study he specified that emotion seeking individuals have readiness to high addiction. Robert et al (2007) in a study on opioids users in Germany showed that opium users had 14.9% anxiety, 11.6% depression, 10.5% schizoid personality, 10.1% psychological weakness and 10.1% antisocial personality. The highest rate was related to heroin addicts. According to research, it seems that stimulant and opioids users have different personality, psychological characteristics that play a

decisive role in their tendency for stimulants and opioids. Therefore, the present study seeks to answer the question whether there is a difference between the emotional dimensions of personality in stimulants and opioids users.

Research method

This study is a causal-comparative study in which the personality emotional were compared in two groups of stimulants and opioids users. The statistical population of this study includes addicts (men and women) who are addicted to stimulants and opioids that referred to quit camps or addiction counseling and psychological centers in Tehran in 2006. The sample consisted of 150 addicts who were selected using targeted and convenience sampling method. It should be noted that 75 stimulants and opioids users were selected as the sample group.

Entry criteria of sample group based on the DSM-5 include: 1- Tolerance symptoms 2- Quit symptoms 3- Permanent desire to reduce or control the substance or unsuccessful efforts in this field 4- Long time to be spent from needed activities to obtain or release material from effects of the material. 5. Important social, occupational, and recreational activities to be excluded due to drug use. 6- Continued drug use, despite awareness of its physical and psychological problems. 7. Ability to read and write to answer a research questionnaire.

Tool

It is the Affective Neuroscience Personality Scale (ANPS). The test questions are classified into 14 blocks used by the following components: search, phobia, care, anger, happiness, sadness and discomfort (only 12 items) that are generally followed by a filling question. Items in each block (numbers 2, 4, 6, 8, 10 and 12) have inverse numbers. To guide the reader, there are 7 items from the "Search" component on the form (numbers 1, 9, 17, 25, 33, 41 and 49) and 7 items on the back of the form that contain numbers (57, 65, 73 81, 89, 97, 105). Rating changes from "normal" to "reverse" seven times. The translation and adaptation steps of this questionnaire with the permission of its creators (Davis et al., 2014) in Iran have been performed by Amini et al. (2017) and its re-translation has been revised by the creators and finalized after modification. In Amini's study (2017), 10 experts' view was used to improve the validity of this questionnaire and its validity was found to be appropriate. The reliability of the questionnaire was 0.84 using Cronbach's alpha.

Findings

Table 1 presents the descriptive indices of the two groups as well as the emotional dimensions of the personality.

Table 4.1 Descriptive Indicators of Personality Emotional Dimensions

Components	User group		Search	Phobia	Care	Anger	Happiness	Discomfort
	Stimulant	opioid						
Number	75	75	150	150	150	150	150	150
Mean	68.716	16.450	16.875	17.083	17.300	17.458	16.875	17.456
SD	11.8301	2.4004	4.7253	4.795	4.7111	4.7684	4.7253	4.7682
Minimum	44.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Maximum	99.00	20.00	27.00	27.00	27.00	27.00	27.00	27.00

Then, Kolmogorov - Smirnov test was performed to investigate normal distribution of variables before multivariate analysis of variance (MANOVA). Since the significance level obtained in the K-S test for most of the variables of the study is more than 0.05, separately, it can be concluded that the distribution of the studied variables in the statistical sample has a normal distribution.

Table 2. Kolmogorov-Smirnov test

Variable	Group	Kolmogorov-Smirnov	Significant level
Search	Opioid	0.077	0.200
	Stimulant	0.076	0.200
Phobia	Opioid	0.107	0.025
	Stimulant	0.087	0.200
Care	Opioid	0.088	0.199
	Stimulant	0.094	0.075
Anger	Opioid	0.087	0.191
	Stimulant	0.088	0.087
Happiness	Opioid	0.103	0.201
	Stimulant	0.94	0.200
Discomfort	Opioid	0.98	0.121
	Stimulant	0.102	0.109

Multivariate analysis of variance (MANOVA) was used to analyze the data on the differences between the two groups of opioids users and stimulants users.

Box test results for investigating the default of all variance-covariance matrices showed a significant level of ($p > 0.05$). Therefore, the

homogeneity of variance – covariance matrix was well observed (F = 1.125, P> 0.05).

Table 3. Box test results to examine the default of all variance-covariance matrices in components of personality dimensions

BOX S M	F	Significance
6.892	1.125	0.345

To determine the significant effect of group on the components of personality emotional dimensions, the Wilks' Lambda test was used and the results are reported in Table 4.

Table 4. Results of the Wilks' Lambda test in multivariate analysis of variance

Test	Value	F	Degree of freedom of error	df	Significant level	Eta squared
Wilks' Lambda	0.847	0.364	156	3	0.001	0.153

The results of Wilks' Lambda test showed that there was a significant difference between two groups in at least one of the components of personality dimensions.

Levon's test was also used to examine the equality of variance in the components of emotional dimensions of personality in the study groups.

Table 5. Levon's test results for investigating the default of equality of variance in personality dimensions of personality.

Variables	F	Df1	Df2	Significant level
Search	2.438	1	158	0.120
Phobia	2.640	1	158	0.106
Care	0.650	1	158	0.799
Anger	2.450	1	158	0.112
Happiness	0.760	1	158	0.567
Discomfort	2.431	1	158	0.456

The table above shows that the variance of the components of the personality emotional dimensions does not differ significantly in the two

groups of opioids and stimulants users, which indicates the reliability of the results.

Table 5. Results of multivariate analysis of variance

Group	Variable	SS	DF	MS	F	Significance	Eta squared
Opioid group	Search	783.225	1	783.225	23.100	0.001	0.128
	Phobia	308.025	1	308.025	7.235	0.001	0.044
	Care	345.156	1	345.156	12.649	0.001	0.074
	Anger	231.435	1	435.345	13.345	0.001	0.055
	Happiness	432.654	1	345.234	21.435	0.001	0.123
	Discomfort	432.987	1	234.456	12.436	0.001	0.023
Stimulant group	Search	5357.175	158	5357.175	13.367	0.001	0.121
	Phobia	6726.375	158	42.572	12.567	0.001	0.012
	Care	4311.538	158	27.288	11.987	0.001	0.098
	Anger	3467.341	158	34.344	12.102	0.001	0.076
	Happiness	5687.345	158	32.453	21.231	0.001	0.066
	Discomfort	4325.543	158	54.543	14.243	0.001	0.145

According to Table 5, there is a significant difference between the two groups of opioids users and stimulants users in the dimension of search ($P < 0.01$, F1, 158 = 23/100). That is, the search score for the stimulant group was significantly lower than the opioid group. The group variable explains 12.8% of the variance of search in the search. There is a significant difference between the two groups of opioid and stimulant users in phobia component (F1, 158 = 7.223) and $P < 0.001$). The phobia score of the stimulant group is significantly higher than the opioid group. The group variable explains 4.4% of the variance in phobia. There is a significant difference between the two groups of opioid and stimulant users in care component (F1, 158 =12.649) and $P < 0.001$). The care score of the stimulant group is significantly lower than the opioid group. The group variable explains 7.4% of the variance in care.

There is a significant difference between the two groups of opioid and stimulant users in anger component (F1, 1 = 13.345) and $P < 0.001$). The anger score of the stimulant group is significantly lower than the opioid group. The group variable explains 5.5% of the variance in anger.

There is a significant difference between the two groups of opioid and stimulant users in happiness component (F1, 1 = 21.435) and $P < 0.001$). The happiness score of the stimulant group is significantly lower than the opioid group. The group variable explains 12% of the variance in anger.

There is a significant difference between the two groups of opioid and stimulant users in discomfort component (F1, 158 = 14.243) and P <0.001). The sadness score of the stimulant group is significantly higher than the opioid group. The group variable explains 14% of the variance in discomfort.

Discussion and conclusion

This study was conducted to investigate and compare the emotional dimensions of personality in opioids and stimulants users. The results showed that there is a significant difference between the emotional dimensions of personality in opioids and stimulants users. That is, there was a significant difference between the two groups of addicts in terms of search, phobia, happiness, discomfort, anger. These results are consistent with the findings of the researches of Habibeh and Teklavi (2016), Tahereh, Khani, Shahram, and Gholamreza, (2011), Gross and Feldman Barrett (2011), Stevens et al., (2004).

The results of the study indicated that the dimension of search in stimulants users is higher than opioids users; it means that following and searching is mainly more in stimulants users. This result may be due to the morale and personality of people who are inclined to use stimulants, so the search dimension itself can lead to more demand of stimulants by searchers than traditional drug users. The research dimension can be related to people's emotion seeking, emotion seeking people are ready for high addiction. The findings did not show a significant difference between the fear dimensions among stimulants users compared to opioids users. The above results show that both groups of users have no phobia to use opioids. Contrary to the results obtained, other results indicated that heroin addicts had a high level of novelty seeking and non-phobia in comparison to opioids and control groups. In addition, the findings show that the anger dimension is higher in opioids users than in stimulants. The findings also show that the dimension of sadness and discomfort in stimulants users is higher than opioids users. Various studies have shown that the most important factor that was significantly associated with the development and persistence of mental disorders was lack of motivation, interest and cooperation to change the conditions. In addition, opioids users had non-motivation and sadness caused by it. Other results indicate that happiness dimension is higher in stimulants users than opioids users. Since this study and previous research show that most of the stimulant users are young people and mostly young people under 40, it can be guessed that due to youth and more energy, they

have more discomfort and anger and happiness than opioids users and they have high-risk behaviors associated with the use of stimulants. According to the World Health Organization (WHO), methamphetamine use is the most abused after cannabis in the world. Currently, there are approximately 26 million regular users of amphetamine versus 16 million heroin users and 14 million cocaine users worldwide. Research findings suggest that stimulants users have a stronger dimension of care than opioids users. Characteristics of impulsivity, emotion seeking, restriction, and prone to social deviations can expose person to these disorders.

These results are consistent with the findings of the researches of Bridges, Denham and Ganiban (2004), Rawlings, Claridge and Freeman (2002), Gratz and Roemer (2004). The use of stimulants increases the level of dopamine in the body and follows symptoms such as aggression, anxiety, obsession, and irritability, hallucinations in individuals that can impair one's physical, emotional, and mental function. Since this study is a comparative study, uncontrolled variables such as age, education, duration of use may have compromised the results of the study. In this study, the age variable was not controllable, because opium-dependent people were older than stimulant-dependent people.

There was also another restriction that duration of use in opioids users was higher due to their high age and lower physical and spiritual destruction, while duration of use in stimulant users (crystal) was much lower due to the lower age and high physical and spiritual destruction. Since most opioid users are not satisfied to just one type of substance, so access to people solely dependent on one type of opioid (in this research, opium) or stimulants is very difficult and this issue causes much limitation. Also, the personality factors specified in this study confirm the problem of changing patterns and trends of drug abuse from traditional to industrial and higher prevalence of stimulants among young people. Over time, change of the pattern of drug abuse, the amount of access to the drugs is due to demographic and geographical differences as well as cultural and economic differences. According to the direct and indirect role of emotional dimensions of personality, it seems that preparing and implementing interventional and preventive programs based on healthy personality, especially in adolescents and young people, can have a significant effect on reducing the tendency for drug abuse. It is suggested that in educational programs in counseling centers, educational centers such as schools, etc., a topic titled Introduction to Personality Types and its Consequences and Emotional Dimensions of Personality to be considered to be investigated the maladaptive consequences of any personality pattern.

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