

Cross-Cultural Evaluation of Personality Characteristics in Addicts

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ABSTRACT

Personality characteristics are one of the most important aspects of individuals that might manage and direct their behaviors. In recent years, a lot of theorists and researchers have discussed that personality plays an important role in the beginning and maintenance of substance dependence disorder and they believed that some particular personality traits seem to be more common in addicted people and these people are more vulnerable to addiction. The main aim of the present study was to investigate “Big Five” personality characteristics (extraversion, neuroticism, agreeableness, conscientiousness, openness to experience) in Indian and Iranian opiate dependent individuals. As, this study was cross-cultural in nature, so 100 opiate dependent and 100 non drug dependent individuals were selected from India and Iran using cluster and simple random sampling, respectively. The primary data collection was conducted using the “Big Five Inventory”. The findings showed that there were significant differences between opiate dependent and non-drug dependent individuals on personality characteristics; as opiate dependent subjects scored higher than non-drug dependents on Extraversion and Neuroticism but, non-drug dependent subjects scored lesser than opiate dependents on Agreeableness, Conscientiousness and Openness to experience.

KEYWORDS: Opiate dependence disorder, Personality traits, Extraversion, Neuroticism, Agreeableness, Conscientiousness, Openness, Cross cultural study.

INTRODUCTION

The phrase “addictive personality” is used frequently, but whether there are certain personality traits of addiction. During the twentieth century, addictive personality was suggested by psychiatry and psychoanalysis professionals (Peele, 1990). They stated that addicted individuals have a dependent personality, which created by an unusually great dependence on their parents in childhood (Vaillant, 1983). Also some psychiatric theories of addiction discussed that some people who are preoccupied with oral consumption and have oral fixations, are at risk to become addict (Frosch, 1970). Because of some difficulties related to psychoanalysis theories, today, few people believed this idea that “dependent” or “oral” personality is able to characterize all addicted individuals (Peele, 1990). Another model that discussed the special personality traits can result in addictive behaviors such as substance dependence, is Tarter’s impulsive personality model (Tarter, Alterman & Edwards, 1985). According to Tarter and his colleagues (1985), people who born with impulsive temperament engages in a range of excessive behaviors to express or control their impulsiveness. They believed that impulsiveness is a key factor that predisposes people to some behavioral problems such as addiction. Although, as different studies have not consistently found the same personality traits for different groups of addicts and also they found addicts have both more and less of some traits, so there are a general rejection of addictive personality theories in substance dependence by researchers (Miller, 1976). These researchers believed that some personality similarities in addict peoples may be due to their years of drug taking and does not represent their original personality.

Overall, in spite of this fact that addictive personality isn’t a real psychological diagnosis, but several theories and researches have shown that some particular personality traits seem to be more common in addicted people and these people are more vulnerable to addiction (Peele, 1990). The most influential of these personality theories are Eysenk’s personality traits theory, Cloninger’s three-dimensional model, Gray theory and Zuckerman’s model. These theories suggested that there are significant associations between drug dependence disorder and particular personality and behavioral characteristics, such as extraversion, neuroticism, impulsivity, sensation seeking. For example according to Eysenk personality trait theory (Eysenk & Eysenk, 1985), extraverts have a great need for external stimulation to maintain an “optimal level of arousal” in their brain cortex, so they seek arousal from exciting or stimulating activities such as drug taking. In contrast to extraverts, introverted individuals naturally have a higher level of cortical arousal and they are able to maintain an “optimal level of

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arousal” without using external stimulation. Eysenk and Eysenk (1985) believed that the basic differences between extroverts and introverts are genetic, not learned. In addition, Gray (1987) proposed a neuropsychological two-dimensional model of personality. Based on this theory, impulsivity trait is motivated due to an appetitive behavioral approach system (BAS) and anxiety trait motivated because of an avoidance behavioral inhibition system (BIS). In Gray’s model, impulsivity is strongly related to extraversion in Eysenck’s model and anxiety is closely related to neuroticism in Eysenck’s model (Gray, 1987). Cloninger (1987) also proposed a three-dimensional model of personality that included novelty seeking (NS), harm avoidance (HA), and reward dependence (RD). NS implies a heritable tendency for intense exhilaration or excitement to novel stimuli. HA is a heritable tendency to respond intensely to signals of aversive stimuli. RD is a heritable tendency to respond intensely to signals of reward (particularly verbal signals of social approval and sentiment) and to maintain or resist extinction of rewarded behavior (Cloninger, 1987). Novelty seeking and harm avoidance traits appear to be almost equivalent to Gray’s BAS, whereas reward dependence trait appears to be nearly equivalent to Gray’s BIS (Carver & White, 1994). The three-dimensional personality model may be able to analyze the interaction between behavioral traits and environmental stimuli to recognize prone individuals for addictive behavior (Ball, 2005). Zuckerman (1984) also introduced the sensation seeking trait that is similar to dimensions related to impulsivity in Eysenck’s and Cloninger’s models (Zuckerman & Cloninger, 1996; Zuckerman, Kuhlman, Joireman, Teta, & Kraft, 1993).

Further studies provided the evidence for these theories and relationships between these personality traits and drug taking behaviors (e.g. Eysenck, 1997; Allen, Moeller, Rhoades & Cherek, 1998; Sarramon, Verdoux, Schmitt & Bourgeois, 1999; Kuo, Yang, Soong & Chen, 2002). According to Le Bon and his colleagues (Le Bon, Basiaux, Streel et al., 2004), personality play an important role in the “predisposition”, “precipitation” and “perpetuation” of substance use related disorder. In addition, several studies have described addictive personality as: making impulsive choices, constantly seeking excitement and new sensations, feeling alienated from mainstream society, valuing deviant or nonconformist behavior, have low self-esteem, seem to lack inhibitions, refuse to accept authority, lie, cheat, steal, or destroy others’ property, act aggressively or violently toward people or animals (e.g. Grant, Stinson, Dawson, Chou, Ruan & Pickering, 2004; Curtiss, 2004). Furthermore, some studies have suggested a higher risk of drug addiction in individuals with special kind of personality, such as immature personality, antisocial personality, self-punitive personality, passive-aggressive personality and stressed or anxious personality (Vaknin, 2007; Kosten, Kosten, Rounsaville, 1989). In the next sections, the relevant researches to the associations between personality characteristics and drug dependence disorder have been presented, separately.

Big five personality traits and drug dependence: Some previous researches and studies have evaluated the “Big Five” personality traits in various drug dependent samples. For example in one study Ball (2005) considered the five factor model perspective to assess personality traits in substance abusers and personality disordered patients. Results showed that both groups had high scores on neuroticism and low scores on agreeableness and conscientiousness. Sutherland (1998) also assessed the amount of “primary trait of neuroticism as well as six accompanying sub traits” in recovering substance addicts who were at the first 12 months of recovery program. Their research indicated that the total scores of neuroticism and sub-trait scores decreased in recovering addicts, but the reduction of sub-trait scores were irregular. According to the author, this reduction could be a function of substance free time. In another study Grana, Munoz and Navas (2008) examined the differences between normal and pathological personalities in drug addicted subjects who classified into two types of consumers, i.e. “Type A (functional) and Type B (chronic)”. The results showed that the functional consumers had higher scores in extraversion and agreeableness in compare to the chronic consumers (Type B), whereas chronic consumers scored higher than Type A on “schizoid and antisocial personality disorder traits”.

Personality traits in Indian addicts: Some studies have assessed personality traits in Indian drug dependent population. For example, Narayan and colleagues (Narayan, Shams, Jain & Gupta, 1997) evaluated the personality characteristics in Indian heroin users using Eysenck Personality Inventory, Trait scale of the State-Trait Anxiety Inventory and the Sixteen Personality Factor Questionnaire. The results revealed that the addicted participants scored higher than control group on five scales, including neuroticism, extraversion, impulsivity and sociability as well as trait, on the State-Trait Anxiety Inventory. Also they had lower scores on intelligence, emotional stability, ego and superego strength, rule compliance and self-sentiment integration on the Sixteen Personality Factor Questionnaire. The findings also showed that addicted subjects were more sensitive, overprotected, prone to guilt, insecure, troubled, tense and frustrated than the non-addicted control group. Another study has been conducted by Lather, Vasudeva and Verma (1997) on drug abuser and non-abuser subjects who were taken from various colleges and universities of Northern India using MPQ. The results showed that two groups were significantly different on all the variables, such as anxiety, depression, hysteria, mania, paranoia, psychopathic deviate, repressor sensitizer and schizophrenia; as the drug abusers scored higher than control group on all these personality dimensions.

Nishith, Mueser and Gupta (1994) assessed personality traits in Indian college males with a history of hallucinogen abuse using Eysenck Personality Questionnaire Addiction Scale (EPQ-AS). The results showed that hallucinogen abusers had significantly higher scores on the neuroticism, psychoticism and Lie scales and non-significantly higher on the extraversion in compared to non-abusers. In another study that was conducted by Sahasi and colleagues (Sahasi, Chawla, Bhushan & Kacker, 1990) Indian male heroin addicts completed Eysenck Personality Questionnaire. The results showed that heroin addicts obtained higher scores on psychoticism, neuroticism and lie scales and lower scores on extraversion in compared to normal group. Furthermore, Rustagi and colleagues (Rustagi, Prabhu, Mohan & Sundaram, 1981) assessed personality characteristics in non-drug users and life-time users by the Eysenck personality inventory and an orientation questionnaire. The results showed that high orientation, extraversion, anxiety and psychopathic deviate scores were associated with a relative risk of drug use. They didn't find any significant difference between the mean scores of users and non-users on mania, paranoia, depression, schizophrenia, hysteria and neuroticism. The same pattern of results was found by Agrawal and colleagues (Agrawal, Puliyeel, Chansoria, Mukerjee & Kaul, 1982).

Personality Traits in Iranian addicts: Several researches have been investigated personality traits in Iranian drug dependent samples. For example, Eftekhari and his colleagues (Eftekhari, Ebrahimi, Azimi, Vahdat & Ahmadkhaniha, 2007) examined personality dimensions in Iranian cannabis users using Eysenck Personality Questionnaire (EPQ). Results showed that the scores of 51% of cannabis users were higher than mean in all dimensions of EPQ. Also the mean scores of neuroticism and psychoticism were higher than the score which Eysenck has reported for Iranian population. Daneshmand (1980) also investigated the personality characteristics in Iranian addicts using Manson Evaluation Scale. He found that hospitalized male addicts had higher scores in all MES scales in compare to non addicts. In another study, Homayouni and colleagues (Homayouni, Nikpour, Khanmohammadi, Mosavi Amiri & Aghajanipour, 2009) evaluated co-occurring personality problems and substance abuse. The findings indicated that there were significant differences between addicted and normal subjects on personality traits. As addicted participants were more neurotic and open to experience than non-addicted subjects, whereas non-addicted control subject were more extroverted, agreeable and conscientiousness than addicted subjects. In a different study Sephrmanesh, Ahmadvand and Saei (2008) evaluated personality traits of heroin abusers in Kashan Prison, Iran. Results showed that 74.62 percent of participants suffered from abnormal personality traits and their prominent personality traits were antisocial and depressed. Another study that has been conducted in Iran by Assarian and Omidi (2004) showed that among opium users, 14% had anxiety, 11.6% had depression, 10.5% was schizoid and 10.1 % had antisocial personality traits. They also revealed that among heroin abusers, the most frequent personality traits were related to anxiety (17.6%), depression (14.4%), and antisocial behavior (14.4%). Furthermore, Zargar and Ghaffari (2009) investigated the relationships between personality traits and addiction potential in Iranian university students using NEO-FFI personality inventory and Iranian Addiction Potential Scale (IAPS). The results showed that there were significant multiple correlations between addiction potential with neuroticism, conscientiousness and agreeableness in university students.

In sum, the significant association between maladaptive personality traits and substance abuse/dependence disorder has indicated in various personality models, theories and researches related to addiction. However, there are several limitations in previous studies that highlight the necessity for further studies. For example, although cultural and personality differences influence several processes in mental disorders, but based on researcher's knowledge, prior to this research, there were no empirical study that be evaluated the personality traits in opiate dependent population from cross cultural points of view. The main aim of the present study was to examine Big Five personality characteristics in Indian and Iranian opiate dependent samples.

METHODOLOGY

Present study's research method was Causal comparison research. As this study's nature was cross-cultural, so two groups were chosen from each country, i.e. experimental group (addicts) and control group (typical people). In this study, addicts have been chosen of male who had DSM-IV-TR scale for using drugs, in Delhi, India and Tehran, Iran, it was easier to access them through de-addiction centers, so in the present study the casual samples has been used. Participants in the control group were recruited among Indian and Iranian male students and staff of universities that located in Delhi, India and Tehran, Iran, without any current or previous addiction of any kind of drug. Both groups were matched with each other as closely as possible for statistical characteristics such as age, education, marital status and monthly income. Descriptive analysis showed that Iranian addicts had mean age of 33.58 years and mean education of 12.50 years. They had used drugs for an average of 11.86 years. Mean amount of drug that they used was 236.20 mg per day and their mean onset age of drug taking was 21.7. The Indian addicts consisted of 50 men with a mean age of 33.64 years and a mean education of 12.66 years. Addicts had used drugs for an average of 10.62 years.

Mean amount of drug that they used was 236.60 mg per day and their mean onset age of drug taking was 22.90. The analyses also showed that mean age of 31.54 years and a mean education of 13.32 years.

Instrument

Personality traits were assessed using the 44-item version of the Big Five Inventory (BFI- John, Donahue & Kentle, 1991). This inventory was made for assessment the Big Five dimensions of personality (Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to experience) without providing for the more complicated and differentiated measurement of the various facets associated with each dimension (Benet-Martinez & John, 1998). BFI items consist of short phrases based on the prototypical characters associated with each of the Big Five dimensions. Each questionnaire’s phrase is scored based on likert’s five point scale ranging from 1 (totally disagree) to 5 (totally agree). Each characteristic’s score is formed by adding the responses’ scores to each scale. By increasing the scores in each scale, individuals are describing themselves at that dimension personality.

Previous researches have presented sufficient evidence of the reliability and validity of the BFI scales (Benet-Martinez, 1998). For example, John and Srivastava (1999) showed a positive correlation between BFI and NEO (r =.92). According to their discoveries, re-test reliability for this questionnaire was (r =0.83) and alpha Cronbach’s reliability coefficient was (r =.83). In addition, they indicated that the convergent validity coefficient was .75 of the all five factors. Also, the BFI and TDA (personality Descriptive characteristics) showed the strongest convergence (mean r =.81), followed by the BFI and NEO-FFI (mean r =.73), and finally the TDA and NEO-FFI has had mean of r =.68 (John & Srivastava, 1991).

RESULTS

In the present study in order to compare differences between Indian and Iranian addicts and typical groups on five personality characteristics, the individual’s scores on all characters were evaluated as multivariate analysis (MANOVA). The SD’s mean and scores related to group and culture have been given in Table 1.

Table 1- Mean and SD personality characteristics (Big Five) stratified by group and culture and the results of MANOVA

| Culture | Groups | Big Five Dimensions of Personality | | | | | | | | | |
|----------------------------|----------------|------------------------------------|-------|---------------|------|-------------------|------|-------------|------|------------------------|------|
| | | Extraversion | | Agreeableness | | Conscientiousness | | Neuroticism | | Openness to experience | |
| | | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Indian | Dependents | 28.42 | 6.05 | 26.24 | 4.86 | 28.16 | 5.00 | 25.56 | 2.94 | 30.82 | 4.44 |
| | Non dependents | 24.02 | 6.55 | 30.02 | 3.88 | 31.32 | 4.41 | 18.46 | 3.86 | 33.14 | 2.81 |
| | Total | 26.22 | 6.65 | 28.13 | 4.77 | 29.74 | 4.95 | 22.01 | 4.94 | 31.98 | 3.87 |
| Iranian | Dependents | 30.10 | 4.42 | 24.74 | 3.46 | 28.98 | 4.37 | 29.56 | 4.11 | 29.12 | 5.65 |
| | Non dependents | 26.06 | 3.59 | 28.28 | 3.02 | 33.84 | 4.61 | 21.08 | 3.11 | 31.52 | 2.36 |
| | Total | 28.08 | 4.49 | 26.51 | 3.73 | 31.41 | 5.09 | 25.32 | 5.60 | 30.32 | 4.47 |
| Total | Dependents | 29.26 | 8.13 | 25.49 | 4.26 | 28.57 | 4.69 | 27.56 | 4.09 | 29.97 | 5.13 |
| | Non dependents | 25.04 | 8.38 | 29.15 | 3.62 | 32.58 | 4.66 | 19.77 | 3.73 | 32.33 | 2.70 |
| | Total | 27.15 | 12.42 | 27.32 | 4.35 | 30.58 | 5.08 | 23.66 | 5.50 | 31.15 | 4.26 |
| F (Group) | | 31.83*** | | 44.32*** | | 37.96*** | | 242.07*** | | 17.13*** | |
| F (Culture) | | 6.18* | | 8.68** | | 6.58* | | 43.70*** | | 8.47** | |
| F (Culture × Group) | | .058, NS | | .048, NS | | 1.71, NS | | 1.90, NS | | .005, NS | |

Note: * p< .05, ** p< .01, *** p< .001

As have been shown in Table 1, MANOVA revealed significant effects for group. $F(1,196) = 31.83, p < 0.001$ in culture basis and $F(1,196) = 6.18, p < 0.05$ on Extraversion measures have been given. Significant effect for group showed that Extraversion scores were different between addicts and typical people (25.04) significantly it was irrespective of culture; as addicts were more extravert than non- individuals. Moreover, significant effect for culture showed that Extraversion’s means were different between Iranian (28.08) and Indian (26.22) addicts regardless of addiction status, as Iranian individuals involve higher scores than Indian individuals in basis of Extraversion scale. The comparison of Conscientiousness scores showed significant effect for group $F(1,196) = 44.87, p < 0.001$, that reflected Conscientiousness measures were influenced by addiction status; as non-drug dependents (29.15) have higher scores of Conscientiousness. In addition, significant main effect is different between Iranian (26.51) and Indian (28.13) addicts regardless their addiction status, because Iranian people involve higher Conscientiousness scale. Significant effect for group reflected that addicts (28.57) scored lower than typical individuals (32.58). Also,

significant effect for culture showed that compatibility scores were significantly different among Iranian (31.41) regardless their addiction status, because Iranian individuals involve higher compatibility than Indian addicts.

The results also showed significant effects for group, $F(1,196) = 242.07$, $p < 0.001$, and culture, $F(1,196) = 43.70$, $p < 0.001$ on Neuroticism scores. Significant effect for group means that addicts involve very greater scores of Neuroticism scale than typical individuals (19.77), irrespective of culture. In addition, significant effect for culture showed that Neuroticism scores were significantly different between Iranian (25.32) and Indian (22.01) individuals regardless their addiction variable; because Iranian individuals were more neurotic than Indian individuals. Finally, the results showed significant effects for group, $F(1,196) = 17.13$, $p < 0.001$ that reflected amount of addiction ability was significantly different between addicts (29.97) and typical individuals (32.33) regardless culture, because addicts scored lower than typical individuals. Also, main effect for culture were found $F(1,196) = 8.47$, $p < 0.01$, that indicated Indian Individuals (31.98) scored higher than Iranian Individuals (30.32). On the other hand, as have been shown in table 1, the mean differences of all five traits regarding culture and its relation with group could not indicate effect of culture and addiction on personality characteristics.

CONCLUSION AND DISCUSSION

The main aim of present research was to compare "Big Five" personality traits (Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to experience) between Indian and Iranian opiate dependent and non-dependent individuals. The results showed that the measures of all five factors, i.e. Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to experience, were different between opiate dependents and non-drug dependent individuals, significantly; as drug dependents scored higher than non-dependent individuals on Extraversion and Neuroticism scales, in contrast they scored lesser than non-dependents on Agreeableness, Conscientiousness and Openness scales. The mentioned results support the finding of previous researches that revealed personality differences between drug dependent and non-dependent subjects (e.g. Ball, 2005; Grana et al., 2008; Narayan et al., 1997; Lather et al., 1997; Nishith et al., 1994; Eftekhar et al., 2007; Homayouni et al., 2009; Sepehrmanesh et al., 2008; Zargar & Ghaffari, 2009). The findings of present study could be explained in several ways. Eysenk's personality traits theory (1985), Cloninger's three-dimensional model (1987), Gray theory (1987) and Zuckerman's model (1984) hold a specific prediction on the relation between personality and drug using. Overall, these theories suggested that there are associations between drug dependence disorder with Extraversion, Neuroticism, impulsivity and sensation seeking. Differences between opiate dependent and non-dependent individuals on Extraversion could be explained using Eysenk personality theory (Eysenk & Eysenk, 1985). According to this theory people, who characterized as extrovert have a great need for external stimulation to maintain an "optimal level of arousal" in their brain cortex. Therefore, to maintain their homeostasis, they are forced to seek arousal from exciting or stimulating activities. But, introvert people are able to maintain an optimum level of arousal without much external stimulation, so, introverts naturally have a higher level of cortical arousal in compare to extroverts. Based on this theory some extrovert individuals, in order to maintain their homeostasis and optimal level of arousal, select drug taking as motivating activity and for this reason extroversion trait is different between opiate dependents and non-dependents. High scores on Neuroticism trait for opiate dependents could be explained by lack of emotional stability in these individuals. Emotional stability is most sensitive trait that influence by drug dependence and for this reason opiate dependents feel more anxiety and depression and are more nervous than non-dependent individuals. In the other side, high Neuroticism in opiate dependence could be seen as consistent with the self-medication hypothesis. According to this model, people use the drugs and become dependent on opiate drugs because they are emotionally unstable. Also it could be explained in this way that opiate dependents don't have ability to adjust with problems and due to lack of self-regulation and self-esteem they experience more stress and tension in their life. In the other side it could be explained in this way that individuals with high tension and stress choose drug taking as way to adjust and deal with their problem and situation.

Low Conscientiousness may be a consistent element in drug dependence and risk behaviors. Conscientiousness is a tendency to show self-discipline, act dutifully, and aim for achievement. Individuals with high Conscientiousness prefer to have a plan for doing everything rather than spontaneous behavior. They tend to manage and regulate their impulses. As the first step for achieve to Conscientiousness tendencies is attention to details and also because the attention and concentration in opiate dependents is impaired, and their impulsivity is high, so the Conscientiousness scores in these subjects is lower than non-dependent individuals. Low Agreeableness in opiate dependent individuals could be explained in this way that drug dependent people are generally unconcerned with others' wellbeing, tend to manipulate other people and get advantage from them. Also their psychopathy and antisocial behavior is very high, consequently it cause to that they become less helpful and honest and more isolated and aggressive. Therefore these factors contribute to decrease amount of Agreeableness trait in these individuals, so

they score lower than non-dependent individuals on this trait. Individuals with high Openness are interested in art and new experience, creative, intelligent and curious. The differences between the two groups on Openness to Experience reflect that a degree of curiosity, sensitive to beauty, conventionality and adherence to traditions in opiate dependent is lower than non-dependent individuals. Therefore, maybe only opiate dependents' interest for new experience couldn't cause to enhance this trait in opiate dependents than non-dependent individuals.

The present findings that showed the association between personality traits with drug taking behavior could be useful and applicable for designing drug prevention program for vulnerable populations. As some personality characteristics are important risk factors for substance dependence, so identification the people who are "at risk" to become drug dependent is important for early prevention interventions. Designing educational programs for "at risk" individuals, especially adolescents, that teach them coping strategies and life skills could be useful for prevention of drug dependence disorder in these individuals. Furthermore, as drug taking behavior are affected by personality traits and culture, so the personality and cultural differences should be considered in treatment protocols. The presence of particular personality characteristics (such as extraversion and neuroticism) among individuals with opiate dependence disorder could have major clinical implications for improving therapy interventions. The therapists should provide different treatment protocols for drug dependent individuals. For example dependent individuals with high extraversion and sensation seeking traits should be dealt with education programs that teach them to maintain their "optimal level of arousal", seek different alternative experiences and exciting activities instead of using drugs, whereas for nervous individuals, their emotional aspects should be considered in treatment programs. The longitudinal studies seem to be helpful that examine whether observed personality characteristics in drug dependents are potential predictors of substance use or they may be generated due to substance dependence disorder.

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