



Investigating the Relationship between Personality Traits and Behavioral Inhibition-Activation System and Tendency to Consume Alcoholic Beverages in the City of Bandar Abbas in 2014-15

Kobra HajiAlizadeh and Roqiyeh Akbari*

Department of Clinical Psychology, Bandar Abbas Branch, Islamic Azad University, Bandar Abbas, Iran.

A B S T R A C T

The present study aims to investigate the relationship between personality traits and Behavioral inhibition-activation system and tendency to consume alcoholic beverages in the city of Bandar Abbas in 2014-15. The results showed that among the variables of personality traits, neurosis and desire for new experiences were of the factors of tendency to alcohol abuse. Alcohol consumption damages are not only restricted to the soul and the body of the individual but also they threaten the family unity and society and create numerous normative problems in the relationship of the family and society members.

Keywords: Personality Traits, Behavioral Inhibition-Activation System, Consume Alcoholic Beverages.

INTRODUCTION

Alcohol consumption is one of the most serious human problems in recent years and is one of the most complex human phenomena. Alcohol abuse and dependence is a chronic condition that causes physical, familial, economic and social injuries and the highest incidence of alcohol consumption is between 18 and 24 years of age (Organization, 2001; Organization & Unit, 2014).

In a survey on the students, it was shown that drug abuse among students in recent years is alcohol, opium and hashish respectively. The rest of the surveys show that alcohol abuse among Iranian students is 17-27% and among Malaysian students is 42.5% (Momtazi & Rawson, 2010; Obiechina & Isiguzo, 2016). Activation is the inhibition of the behavior of variables that have been recently studied in relation to drug abuse.

Gray, Young, and Waytz (2012) explains that how personality traits related to brain predispose individuals to damaging psychological disorders. There are two basic systems of brain in Gray's theory that control the behavior and emotions. The behavioral inhibition system is activated by the conditioned stimulus that is related to the punishment or reward elimination and the behavioral activation system is activated by the stimulus that is related to the reward or eliminating the punishment in order to guide the organism to the stimulator. People with high

*. Corresponding Author: Akbari@gmail.com

DOI: [In pressing](#)

To cite this article: Hajjalizadeh, K. & Akbari, R. (2016). Investigating the Relationship between Personality Traits and Behavioral Inhibition-Activation System and Tendency to Consume Alcoholic Beverages in the City of Bandar Abbas in 2014-15. *Iranian Journal of Positive Psychology*, 2 (1), 8-17.

sensitivity in behavioral activation system tend more to experience trend behavior and positive affection in terms of stimulating with reward(Purkord, Abolghasemi, Narimani, & Rezaee, 2013).

In their clinical studies, Flay, Phil, Hu, and Richardson (1998) have identified various variables as predictors of drug dependence, which are divided into four categories: (A) socio-cultural environment factors, (B) interpersonal factors, (C) psycho-behavioral factors, and (D) biological and genetic factors.

Gibson, Schreck, and Miller (2004) conducted a study as alcohol abuse and alcohol-related negative behaviors of an empirical test of self-control theory. The results showed a significant negative relationship between alcohol consumption and self-regulation, that the lower the self-control ability, the higher the alcohol consumption. There is a significant relationship between alcohol consumption and association with deviant friends. There is a significant relationship between negative behaviors related to alcohol consumption and self-control.

In a survey, Aliverdinia and Hemati (2013) analyzed the tendency to alcohol consumption among university students of Social Sciences faculty of Tehran University socially. The descriptive research data showed in all dimensions that there is a significant difference in the dependent variable in male and female students in terms of tendency to alcoholic beverages. In other words, in all domains (cognitive, behavioral and emotional), men are more likely to drink alcohol. Theoretical achievements of this research have been to develop a cohesive scale to measure attitudes to alcohol. According to data analysis, variables of religiosity, educational continuity, self-control and formality have had significant effect on alcohol consumption and the variable of religiosity has been the most important justifier of the tendency towards alcohol.

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If we are not able to know the causes of tendency of individuals to alcohol through scientific tools appropriately, we shall see the rise of alcohol consumption among our youth.

The present study seeks to study the difference between healthy people (no alcohol addiction) with the alcohol addicts in terms of personal traits and behavioral inhibition-activation system for the tendency to alcohol consumption. Therefore, the main aim of the present study is to investigate whether there is a relationship between personality traits behavioral inhibition-activation system in the tendency to consume alcoholic beverages in the city of Bandar Abbas?

METHODOLOGY

In this study, descriptive and correlation-based research methods are used according to the nature and purpose of the study. The statistical population of the study included all male

residents of Bandar Abbas in 2014-15. Sample study consisted of 100 subjects: 50 healthy subjects and 50 alcohol consumers who were selected by simple random sampling from the available society. Two questionnaires were used to collect information as follows:

Scale of behavioral activation / inhibition systems: Scale of behavioral activation / inhibition systems (Carver & White, 1994) contains 20 self-report questions and two subscales: BIS subscale and BAS subscale. The two sub-scales are described below:

– BIS subscale consists of seven items in the questionnaire that measures the sensitivity of the behavioral inhibition system or respond to threatening and feelings of anxiety when dealing with threaten.

– BAS is the thirteen-item scale, which measures the sensitivity of Behavioral Activation System, and contains three other subscales that include:

1. Drive (BAS-DR, four items),
2. Reward Responsiveness (BAS-RR, five items)
3. Looking for entertainment (BAS-FS, four items)

Items are ranked on a four-point scale by the participants each option score of which is presented in the following table:

Table 1. Rank of each response

Option	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
Rank	4	3	2	1

In the following table, the subscales of the questionnaire and the question numbers related to each subscale are presented:

Table 2. The question numbers related to each subscale are presented

Subscale		Question numbers
BIS subscale		2-8-13-16-19-22-24
BAS subscale	drive (BAS-DR)	3-9-12-21
	Reward Responsiveness (BAS-RR)	4-7-14-18-23
	Looking for entertainment (BAS-FS)	5-10-15-20

To get the points of each dimension, the total score of the questions related to the dimension should be summed up. Care must be taken that course options 1,6,11 and 17 have little or no effect on scoring and are solely added for coordination with the rest of items of the questionnaire.

Carver and White (1994) have reported the internal consistency of BIS subscale as 0.74 and internal consistency BAS subscale as 0.71.

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Five-item personality traits Assessment Questionnaire (NEO): NEOPI-R personality questionnaire is the substitute for NEO test which was created in 1984 by (Casta & McCre). This questionnaire measures 5 main factors of personality and 6 characteristics in each trait; in other words, it measures 30 traits. In the survey of Atashrooz (2007), they obtained Cronbach's alpha coefficient for each of the five traits using internal consistency as: neuroticism, extraversion, openness, agreeableness and conscientiousness, as 0.74, 0.55, 0.27, 0.38 and 0.77 respectively.

RESULT

In order to test the mentioned hypothesis, the relationship of the each of the personality traits with the tendency to consume alcoholic beverages was studied. In this regard, the logistic regression test was used the results of which are as follows:

Table 3. Results of chi² test of the significance of regression model

Chi ²	Degree of freedom	Level of significance
62.718	1	0.001

According to the obtained chi² and p value less than 0.05, the regression model is significant.

Table 4. The regression coefficients between personality traits and tendency to consume alcoholic beverages

Variable	B	S.E	Wald	Determination coefficient	Degree of freedom	Level of significance
Neurosis	1.742	0.329	28.046	0.466	1	0.001

Coefficient of determination indicates that 0.466 percent of the modifications of tendency to consume alcoholic beverages are predicted by neurotic features and considering the amount of obtained Wald and that the p value obtained is less than 0.05, so the hypothesis is validated. As a result, there is a relationship between the characteristics of neuroticism and tendency to consume alcoholic beverages in Bandar Abbas.

Table 5. Results of chi² test of the significance of regression model

Chi ²	Degree of freedom	Level of significance
71.854	1	0.001

According to the obtained chi² and p value less than 0.05, the regression model is significant.

Table 6. The regression coefficients between personality traits and tendency to consume alcoholic beverages

Variable	B	S.E	Wald	Determination coefficient	Degree of freedom	Level of significance
Extroversion	2.180	0.404	29.076	0.513	1	0.001

Coefficient of determination indicates that 0.513 percent of the modifications of tendency to consume alcoholic beverages are predicted by extroversion features and considering the amount of obtained Wald and that the p value obtained is less than 0.05, so the hypothesis is validated. As a result, there is a relationship between the characteristics of extroversion and tendency to consume alcoholic beverages in Bandar Abbas.

Table 7. Results of chi² test of the significance of regression model

Chi ²	Degree of freedom	Level of significance
56.629	1	0.001

According to the obtained chi² and p value less than 0.05, the regression model is significant.

Table 8. The regression coefficients between personality traits and tendency to consume alcoholic beverages

Variable	B	S.E	Wald	Determination coefficient	Degree of freedom	Level of significance
the desire for new experiences	1.592	0.294	29.314	0.432	1	0.001

Coefficient of determination indicates that 0.432 percent of the modifications of tendency to consume alcoholic beverages are predicted by the desire for new experiences features and considering the amount of obtained Wald and that the p value obtained is less than 0.05, so the hypothesis is validated. As a result, there is a relationship between the characteristics of the desire for new experiences and tendency to consume alcoholic beverages in Bandar Abbas.

Table 9. Results of chi² test of the significance of regression model

Chi ²	Degree of freedom	Level of significance
71.486	1	0.001

According to the obtained chi² and p value less than 0.05, the regression model is significant.

Table 10. The regression coefficients between personality traits and tendency to consume alcoholic beverages

Variable	B	S.E	Wald	Determination coefficient	Degree of freedom	Level of significance
Agreeableness	2.159	0.409	27.839	0.511	1	0.001

Coefficient of determination indicates that 0.511 percent of the modifications of tendency to consume alcoholic beverages are predicted by agreeableness features and considering the amount of obtained Wald and that the p value obtained is less than 0.05, so the hypothesis is validated. As a result, there is a relationship between the characteristics of agreeableness and tendency to consume alcoholic beverages in Bandar Abbas.

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Table 11. Results of chi² test of the significance of regression model

Chi ²	Degree of freedom	Level of significance
58.637	1	0.001

According to the obtained chi² and p value less than 0.05, the regression model is significant.

Table 12. The regression coefficients between personality traits and tendency to consume alcoholic beverages

Variable	B	S.E	Wald	Determination coefficient	Degree of freedom	Level of significance
Openness	2.159	0.409	27.839	0.444	1	0.001

Coefficient of determination indicates that 0.444 percent of the modifications of tendency to consume alcoholic beverages are predicted by openness features and considering the amount of obtained Wald and that the p value obtained is less than 0.05, so the hypothesis is validated. As a result, there is a relationship between the characteristics of openness and tendency to consume alcoholic beverages in Bandar Abbas.

Table 13. Results of chi² test of the significance of regression model

Chi ²	Degree of freedom	Level of significance
71.735	1	0.001

According to the obtained chi² and p value less than 0.05, the regression model is significant.

Table 14. The regression coefficients between personality traits and tendency to consume alcoholic beverages

Variable	B	S.E	Wald	Determination coefficient	Degree of freedom	Level of significance
Responsibility	2.159	0.403	28.697	0.512	1	0.001

Coefficient of determination indicates that 0.512 percent of the modifications of tendency to consume alcoholic beverages are predicted by openness features and considering the amount of obtained Wald and that the p value obtained is less than 0.05, so the hypothesis is validated. As a result, there is a relationship between the characteristics of responsibility and tendency to consume alcoholic beverages in Bandar Abbas.

Table 15. Results of chi² test of the significance of regression model

Chi ²	Degree of freedom	Level of significance
85.002	1	0.001

According to the obtained chi² and p value less than 0.05, the regression model is significant.

Table 16. The regression coefficients between emotional atmosphere of the family and tendency to consume alcoholic beverages

Variable	B	S.E	Wald	Determination coefficient	Degree of freedom	Level of significance
Inhibition system	2.488	0.489	25.899	0.573	1	0.001

Coefficient of determination indicates that 0.573 percent of the modifications of tendency to consume alcoholic beverages are predicted by inhibition system features and considering the amount of obtained Wald and that the p value obtained is less than 0.05, so the hypothesis is validated. As a result, there is a relationship between the inhibition system and tendency to consume alcoholic beverages in Bandar Abbas.

Table 17. Results of chi² test of the significance of regression model

Chi ²	Degree of freedom	Level of significance
63.787	1	0.001

According to the obtained chi² and p value less than 0.05, the regression model is significant.

Table 18. The regression coefficients between behavioral activation system and tendency to consume alcoholic beverages

Variable	B	S.E	Wald	Determination coefficient	Degree of freedom	Level of significance
Behavioral activation system	2.816	0.338	28.794	0.472	1	0.001

Coefficient of determination indicates that 0.472 percent of the modifications of tendency to consume alcoholic beverages are predicted by behavioral activation system features and considering the amount of obtained Wald and that the p value obtained is less than 0.05, so the hypothesis is validated. As a result, there is a relationship between the behavioral activation system and tendency to consume alcoholic beverages in Bandar Abbas.

CONCLUSION

According to the obtained coefficient from table 15-4, the characteristics of neuroticism predict 0.466 percent, extroversion 0.513 percent, a desire for new experiences 0.432 percent, agreeableness 0.511 percent, openness 0.444 percent and responsibility 0.512 of the modifications of tendency to consume alcoholic beverages by neurosis features, so the hypothesis is confirmed. And there is a relationship between personality traits and tendency to consume alcoholic beverages.

The results showed that Emotional Dysregulation and Child Abuse Experience are able to predict smoking, drug, alcohol and psychoactive drugs use to varying degrees.

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The theory of personality, in the form (the theory of cerebral-behavioral systems), refers to the existence of a relationship between personality dimensions and cerebral processes like the theory of Isnek. In order to explain the individual differences, it refers to the role of biological-neurotic factors and in this regard, brain-behavioral system knows activity and how to locate and overcome them in individuals as the factor of creating individual differences in the attention and selection of stimulants and the occurrence of behavior in them. The widespread review of literature has studied the relationship between Isnek's personality traits with drug abuse and the results suggest the key role of psychosis in alcohol and drug abuse. Gray's theory (1970) is also one of the prominent theories that underlie extensive research on drug abuse, alcohol and smoking. In recent decades, researches in various fields of psychology have shown that there are two separate systems that shape human behavior. Although these approaches have used different words, but the main idea that is the belief in the existence of two separate systems in the brain are the same. In this regard, the satisfactory system is sensitive to signs of reward and leads behaviors to gain rewards.

In contrast, the disgust system is responsible for punish stimuli and avoids behaviors that

lead to disciplinary. The example of these binary approaches is Reinforcement Sensitivity Theory (1993). The theory raises two systems of behavioral activation (BAS) and behavioral inhibition (BIS).

Reinforcement Sensitivity Theory is a life-centered theory that states personality differences are rooted in the differences between people's reward system. BAS is sensitive to signs of punishment and is a factor to warn individuals for danger possibility and punishment. The behavioral activation system which is sensitive to the signs of reward, will lead us into behavior. Individual differences in the behavioral inhibition/activation systems show the principal dimensions of personality. Some authors have stated the concept of reward violation syndrome as the probable factor in the expansion of disorders related to the drug abuse. As the theory of Gary predicted, positive correlations between the high activity of BAS with addictive behaviors such as alcohol and drug abuse have been found in various studies.

Some researches which are conducted in the field of the relationship between behavioral inhibition/activation systems are aimed at problems related to alcohol consumption. There is positive and significant relationship between the high sensitivity of the behavioral activation system and alcohol abuse. In the present study, the tendency to alcohol for the total sample is 86% and for healthy people is 96% and for the consumers is 76%.

Personality traits (neuroticism and a tendency to new experiences) and the more inhibition show more consuming.

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