



## Relation between Brain systems with risk behavior and drug use behaviors amount Youth

(PP 642 - 645)

<https://doi.org/10.21271/zjhs.24.s5.46>

Supplementary Vol.24, No.5, 2020

ICEPS 29, 30 JANUARY 2020

FIRST INTERNATIONAL CONFERENCE FOR  
EDUCATIONAL AND PSYCHOLOGICAL SCIENCES

المؤتمر الدولي العلمي الاول للعلوم التربوية والنفسية بكلية التربية في جامعة صلاح الدين-اربيل

**Behzad Nader Nejad**

Educational Management,  
Sanandaj, Iran  
Educator in Kurdistan  
Electricity Distribution Co.

**Farshad Ataei**

in higher education  
Management, Sanandaj,  
Iran  
Instructor of Applied Science  
Training Center, Sanandaj  
Ataei.farshad59@gmail.com

**Alireza Sedighi**

Educator in Kurdistan  
Electricity Distribution Co.

### Abstract

emotional crisis caused social problems, adventure, pleasure seeking, and a variety of other political and Adolescence because of certain physical and mental characteristics tend to live in one of the most dangerous periods of substance abuse and risky behaviors. One of the theoretical approaches in explaining the phenomenon of brain systems and behavior. Individual differences in brain systems are based on behavioral and emotional reactions to different results of each activity. This study examined the relationship between brain systems and behavior in predicting the likelihood of substance use and risky behaviors in adolescents were male. Methods: This study was Ali, the events of 115 male adolescents aged 12 to 19 years were selected using random sampling. And scale brain systems - behavior (BAS / BIS), Iranian Teens Risk Scale (IARS) and the readiness of addiction (IAPS) to complete. Results using Pearson correlation and stepwise regression analysis and descriptive statistics were analyzed.

### Results

The findings suggest that behavioral inhibition system (BIS) and high-risk behaviors associated with drug trend is significant. Activation system (BAS) and behavioral subscales drives, sensitivity toward and pleasure seeking tendency has no direct relation to substance use and risky behavior. Stepwise regression analysis showed that the subscales of the activation system and drug subscales predicted pursuit of pleasure can be risky behavior. Conclusion: It seems that people who are sensitive BAS and are in search of pleasure, are vulnerable to substance use and risky behavior.

**Keywords:** brain systems - behavior, risky behaviors, drug preparation.

### Statement of the problem :

Young people are more prone to drug abuse than other social groups because of identity crises, psychological crises caused by social problems, adventure, pleasure, and diversity (Suth, 1995). Current and future mental and social status are different from those of their counterparts because of the transient nature of student life, subject to stressors (Muller and Steel, 2001) and have to contend with increasing global demands for issues. Such as jobs, lifestyles, friends, family, religion, and politics decide to come out and meet Khan's expectations. Families, teachers, friends and other groups to meet. These stresses can lead to many abnormalities in individuals. (Azad Marzabadi, 2004) Studies of youth and students in increasing drug use (Razaghi et al., 2003; Rahimi Mohtar et al., 2006) Alcohol use, use of



psychotropic substances , Sexual Risk, Cigarette Smoking, Dangerous Driving and Violence. (Fanian et al., 2007)

High-risk behaviors in terms of irreparable academic, psychological, pharmaceutical, social, legal, health and economic disadvantages such as dropout, academic and career failure, academic stagnation, greater prevalence of substance use in the student community, and promotion of consumer culture throughout the community. Modeling the educated cortex, the risk of having sexually abusive behaviors, and the risk of developing sexually transmitted diseases, are especially significant. (Soleimani Nia, Jazayeri&Mohammadkhani, 2005)

Beeth-Marom and Fischhoff (1997) have identified risk as meaning "probability of absence" and defined risky behavior as risky. Risk refers to behaviors that increase the likelihood of negative, unpleasant, and potentially damaging physical, psychological, and social outcomes for the individual. (Beatty et al., 1997). For Boyer, the most important, high-risk, unpleasant behaviors include alcohol consumption, tobacco use, unsafe sexual activity, risky driving, interpersonal violence. High-risk behaviors as well as addiction have been mired in myths and misunderstandings. Today, with the advancement of science, our views and understanding of such high-risk behaviors have changed, and new findings related to the human brain have transformed their understanding of high-risk behaviors. It has enabled us to answer the problem correctly, but it does There are many biological and brain factors that underlie risky behaviors, and we are still at the forefront of searching for genetic differences related to the occurrence and progression of these disorders, so the present study aims to investigate and clarify the predictive role. Brain styles of behavioral activation and inhibition tend to involve risky behaviors and substance abuse.

### Method :

The present study was conducted in the context of a post-event survey. The statistical population of the study consisted of all male adolescents in the city of Sanandaj. 115 adolescents aged 12 to 19 years were selected by random sampling and BAS / BIS questionnaire, Iranian Adolescent Risk Scale (IARS) and Addiction Readiness Scale. (IAPS) completed. The results were analyzed using Pearson correlation coefficient and stepwise regression analysis and descriptive statistics indices.

### Tool:

1. Behavioral Inhibition / Activation Systems Questionnaire (Carver & White, 1994): This 24-question questionnaire has BIS and BAS scales and 4 deviant questions. The BAS scale has three sub-scales, which include reward response, incentive, and entertainment search. Reliability of BIS was 0.74 and for BAS subscales were 0.73, 0.76 and 0.66, respectively (Carver & White, 1994).
2. Iranian Adolescent Risk Scale (IARS) (AlizadehMohammadi et al., 2011): This scale is adjusted to 38 items based on Iranian cultural conditions and social characteristics and 7 dimensions of drug tendency, alcohol tendency , Tendency to smoking, tendency to violence, tendency to sexual behavior and behavior, tendency to intercourse, and tendency to dangerous driving. Cronbach's alpha for the whole scale and subscales were 0.94 and 0.74- 0.93, respectively (AlizadehMohammadi et al., 2011).
3. Addiction Readiness Scale (I.A.P.S): The I.A.P.S Scale was used to measure addiction readiness. This localized scale is the A.P.S (Preparedness for Addiction Acceptance) Scale, designed based on Iranian culture by goldsmiths at ShahidChamran University in Ahvaz. This scale has 2 factors and 41 items. The total reliability of the test is reported to be 0.90 (Zarger, 2009).

### Findings:

Pearson correlation method was used to investigate the relationship between behavioral brain systems and substance use risk and high risk behaviors. The results are presented in Table 1.



The results of this table show that the probability of substance use risk behaviors is positively and positively correlated with behavioral activation system and behavioral subscales, reward sensitivity, and pleasure seeking, but with inverse behavioral inhibitory system (0.05 > P)

Table 1. Correlation matrix between behavioral brain systems, substance use risk, and high risk behaviors

Variable	BAS	drive	Reward sensitivity	Pleasant	BIS	Possibility of consuming materials	High risk behaviors
<b>BAS</b>	<b>1</b>						
<b>drive</b>	<b>0/60*</b>	<b>1</b>					
Reward sensitivity	<b>0/66*</b>	<b>0/13</b>	<b>1</b>				
Pleasant	<b>0/63*</b>	<b>0/38*</b>	<b>0/77*</b>	<b>1</b>			
<b>BIS</b>	<b>-0/03</b>	<b>0/27</b>	<b>-0/38</b>	<b>-0/45*</b>	<b>1</b>		
Possibility of consuming materials	<b>0/69*</b>	<b>0/33*</b>	<b>0/44*</b>	<b>0/59*</b>	<b>0/61_*</b>	<b>1</b>	
High risk behaviors	<b>0/78*</b>	<b>0/46*</b>	<b>0/58*</b>	<b>0/72*</b>	<b>0/54_*</b>	<b>0/67*</b>	<b>1</b>

In Table 2 presents multiple regression models using standardized stepwise coefficient-tier method to evaluate the contribution of each variable to the model. The results of this table show that behavioral activation system and pleasure seeking subscale and behavioral inhibition system in prediction. Risk of substance use and risky behaviors have a significant role.

Table 2. Multiple regression analysis indices by stepwise method Model B Standard error of the Beta t criterion level of significance.

model	B	standard deviation error	Beta	t	sig
BAS	0/178	0/09	0/310	2/41	0/034
<b>drive</b>	0/121	0/08	0/20	0/89	0/581
Reward sensitivity	0/111	0/09	0/16	1/62	0/326
Pleasant	0/195	0/07	0/21	2/43	0/019
BIS	0/278	0/05	0/38	4/89	0/001

**Discussion and conclusion:**

In theory, BAS is associated with alertness and BIS with anxiety. According to Reinforced Sensitivity Theory (RST), abnormal and normative personality are along a continuum. Thus, individuals at the lower poles of the dimensions of the behavioral activation system and behavioral inhibition system are more likely to develop pathological symptoms (Pickering & Gray, 1999). Also, malfunctioning and unbalance in any of the systems or their interactions can lead to abnormal signs and symptoms. Some of these abnormal behaviors, which have



profound direct and indirect effects on the health of the individual and society and have negative consequences, are called "high risk behaviors". These behaviors are called unhealthy if one behaves in a person's personality. High-risk behaviors, most commonly seen in adolescence and adolescence, mainly include smoking, addiction and substance abuse, trauma-related behaviors (such as violence), unhealthy sexual behaviors, unhealthy eating patterns, and a pattern of low-level mobility. Recognition of these misconceptions will lead to healthy living and health and empowerment of the group. The results of this study show that the risk of substance use and high risk behaviors with behavioral activation system and behavioral subscales, reward sensitivity and pleasure seeking There is a positive and significant relationship, but in behavioral inhibition systems, this relationship is inverse and significant. In theory, increased activity of the behavioral inhibition system leads to anxiety (Gray, 1991). In his view, people with strong BIS respond to punitive signs, lack of rewards and new stimuli by inhibiting current behavior, while shifting their attention to environmental stimuli, which is evident in the findings of the present study. Also, using multiple regression model, a significant relationship was observed between behavioral activation system and pleasure seeking subscale and behavioral inhibition system in predicting the probability of substance use and high risk behaviors. According to this result, the emotional disturbances caused by behavioral inhibition systems may sometimes be in the form of strong feelings about harmful substances and sometimes in the form of negative emotions such as hatred. Since behavioral brain systems are associated with the brain's dopaminergic system, dopaminergic release in dopaminergic systems plays a role in behavioral activation systems in the tendency for risky behaviors and the likelihood of abuse. Since the use of additives causes dopamine release in behavioral activation systems. Therefore, it can be said that these systems play an important role in the tendency of individuals to behave differently. It is hoped that the results of this study can be exploited by health practitioners and social planners in the field of addiction treatment and treatment (God willing).

### Sources:

- 1: Azadi Frontier, Esfandiar. (1383). The Role of Cultural Stress in Students' Mental Health. Presented at the Third National Student Mental Health Seminar. TarbiatModarres University, March 12 .
- 2: Delaware, Ali; Alizadeh, Abraham, and Rezaei, Ali Mohammad (2004). Development and standardization of the Drug Attitude-Drug Test and Determination of Relationship between Personal and Family Components for Students. High school in Tehran. Quarterly Journal of Education, 79
- 3: RahimiMohtar, Afrin; TazimiYazdian, Goddess; and Younessian, Masoud (2006). A Study of the Status of Substance Abuse among Iranian Students. Journal of Monitoring, 5
- 4: Serajzadeh, Hussein (2004). Partially hidden: The report of Tehrani students on social deprivation - implications for cultural management. Journal of Humanities: A Special Issue in Sociology, No. 41
- 5: Fanian, Hassan Ghadi Pasha, MasoudGhodousi, (2007). Epidemiologic study of traffic accidents in Isfahan province in 1997-91 forensic medicine 46.
- 6: Ghaffari, Mohtasham; Niknami, Shamsaldin; Kazemnejad, Anushirvan 2. (1386). Design, Validity and Reliability of Ten Scales for Prevention of AIDS in Adolescents. Improvement, successive 11
- 7: MohtashamAmiri, Zahra; Khalili Mousavi, Azad; Industry Friendly, Mehrnaz; JafariShakib, Ecstasy Intake in Guilan Students Monitoring Quarterly,
8. World Health Organization (WHO). Report on the Global Epidemic. 1st ed. UNAIDS, Geneva, 2006;PP: 2-6.
9. Hubble John. AIDS and ways to prevent and combat it. Tehran, Deputy Treatment and rehabilitation]. Valizadeh M. Tehran, Publishing Red Crescent Society of Iran. 2005; PP: 50-51. (Persian)
10. Masnavy A, Sam E, Hosseini A, Agabakhshi H, Foroughn M, Sadat J, et al. [The attitude of Medical Sciences University dormitory on diversion behavior in dormitories]. RehabilitationJournal 2005, 6(4): 20-25. (Persian)