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ORIGINAL ARTICLE

**The Comparison of Personality traits in Normal individuals and individuals with Irritable Bowel Syndrome**

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**ABSTRACT**

*The main purpose of this research is comparison of personality traits in normal individuals and individuals with irritable bowel syndrome. The samples are 400 students of first and second semester of Tehran city universities that from among this number 129 boys and 241 girls were selected using clustering sampling. The tool of inquiry is two questionnaires of personality features that consist of five neo factor and a 20 item questionnaire that is made by researcher about irritable bowel syndrome. To analyze the hypothesis of this research and analysis of the results from research questionnaire t-test analysis of two independent samples was used. The result of data analysis showed that neurosis of normal people and people with irritable bowel syndrome is different and the rate of neurosis in people with irritable bowel syndrome is more than normal individuals. Finally it was specified that there is no meaningful difference in the case of extroversion, openness to experience, agreeableness, and responsibility in normal individuals and people with irritable bowel syndrome.*

**Keywords:** irritable bowel syndrome, personality traits

Received 02.07.2017

Revised 21.10.2017

Accepted 29.12.2017

**How to cite this article:**

A Baghdasarians, D Manavipour, S S Nouri. The Comparison of Personality traits in Normal individuals and individuals with Irritable Bowel Syndrome. Adv. Biores., Vol 9 [1] January 2018:102-105.

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**INTRODUCTION**

The concept of personality in psychology regardless of special definitions is called configuration. Here we limit its definition to two cases that are considered as two poles of a spectrum of psychological insights about human being and their behaviors. They are in an insight pole that consider the world inside man as original and interpret its behaviors beside insight and in the other pole there are acute behavioristic insights that consider the world inside human being impossible to be studied and analyze everything in behavior and organism reactions against environment [1].

We can state that personality is a feature that in a design or in general is united and formed. These traits are represented in the behavior of individuals. As these traits are stable and predictable to some extent in individuals, but is changeable evolutionary [2]. Sheldon considers personality as an active organization having features of perception, reactive and automatic, physical, figuration and survival actions of body [3]. Also, personality defined as internal and external unique features of individual that affects behavior in different situations. The concept of personality and personality characteristics of people in psychology is a common concept, but it is extraordinarily complex. As Alport states having more than 50 different definitions of personality represent its complexity, but in a comprehensive definition personality indicates those parts of personal features or individuals that consist of stable mental, emotional and behavioral patterns [4].

Personality as "specific patterns of behavior (involving anxieties and thoughts) that specifies compatibility of every person against his/her living environment. Michel considers behavior as a specific behavioral pattern that determines types of compatibility of every person against his/her environment [5]. Because personality is a set of physical, mental and behavioral features, therefore, factors that provide these characteristics are also the factors that configure personality. The first parts of these features or physical features are created by heredity and another part is generated from social factors with environment. Determining the fact that which of these two agent have a more important in personality is an impossible job. But it is obvious that personality of each person is the result of

interaction and mutual impact of both factors. It means that on one hand environmental factors in the framework of possibilities and physiological limitations and heredity structures and on the other hand potential abilities that generally are the result of heritage can be flourished and activated when they have an appropriate environment for flourishing [6]. As there has been many researches regarding personality but its impact on physical diseases is discussed fewer and the fact that personality of people influences on their physical problems. Researcher is looking forward to answer this question that whether there is any difference between personal characteristics of normal students and students with irritable bowel syndrome?

**Research Hypothesis**

- Neurosis of normal individuals and individuals with irritable bowel syndrome is different.
- Extroversion of normal individuals and individuals with irritable bowel syndrome is different
- Openness to experience of normal individuals and individuals with irritable bowel syndrome is different
- Agreeableness of normal individuals and individuals with irritable bowel syndrome is different
- Responsibility of normal individuals and individuals with irritable bowel syndrome is different

**MATERIAL AND METHODS**

This is a reasoning-comparative research. Population of this research is all of the students' first and second semester in Tehran universities in the educational year of 2011-2012. The case study of this research was 400 people that were selected from the entire population using clustering method. After sampling two groups were specified, the first group have irritable bowel syndrome and second group are normal people. People with irritable bowel syndrome using research made questionnaire in this project and after changing to a norm they were divided from normal individuals. In this research the tools are two questionnaires of personality traits with five neo factor and questionnaire that are made by researcher for irritable bowel syndrome that we discussed it below:

1. NEO personality inventory of five factors

Questionnaire of NEOPI-R is one of the personality tests that was created by MacCere and Costa in 1985 under the title of NEO personality questionnaire that is a 60 item questionnaire that is used for evaluating five main factor of personality that are neuroticism, extraversion, openness to experience, agreeableness and conscientiousness. The result of studies by MacCare and Costa [7] showed that correlation of five subscale of short form with long form is from 0.77 to 0.92. Also, internal similarity of its subscales after doing calculations for neurosis factors, extroversion, acceptability, compatibility and conscientiousness is respectively 0.72, 0.68, 0.69, 0.88, 0.78.

The method of scoring questions is as five item Likert that are totally disagree (0) , disagree(1), no idea (2), agree (3), totally agree (4). Some questions are scored reversely.

2. irritable bowel syndrome questionnaire

this questionnaire that is provided by researcher contains 20 questions that these 20 questions evaluate the irritable bowel syndrome that is the result of the system. This questionnaire has two answer of yes or no. yes (1) no (0). Scoring domain of this questionnaire is from 0 to 20 scores and to the extent that the score increases the intensity of irritable bowel syndrome increases. The creditability of irritable bowel syndrome test according to the Kronbakh Alfa coefficient is analyzed and it is 0.86.8. in this research using the method of data analysis T independent and data variance analysis are was analyzed.

**RESULTS**

Hypothesis 1: Neurosis of normal individuals and individuals with irritable bowel syndrome is different. To analyze the significance of difference between averages of neurosis of normal individuals and people with irritable bowel syndrome independent t-test was used. Result is represented in table 1.

Table 1: result of t-test for analyzing neurosis of normal individual and irritable bowel syndrome

Variable	Test $\phi$	Level of Significance	Test $\tau$	Freedom Degree	Level of Significance (Two Domains)
Neurosis	1.467	.227	-3.359	398	0.01

Based on the result of table 1 according to the similarity assumption of variances for the rate of neurosis the calculated t in the variance homogeneity conditions in the level of 0.01 is meaningful  $t = 0/001 p(398) = -3/359$ . Based on the average scores of neurosis for normal individual (M=22.39) and average of the scores of neurosis for people having irritable bowel syndrome (M=24.66) we can conclude that the rate of neurosis in people having irritable bowel syndrome is more than normal individuals.

Second hypothesis: Extroversion of normal individuals and individuals with irritable bowel syndrome is different.

To analyze the significance of difference between averages of extroversion of normal individuals and people with irritable bowel syndrome independent t-test was used. Result is represented in table 2.

Table 2: result of t-test for analyzing extroversion of normal individual and irritable bowel syndrome

Variable	Test $\phi$	Level of Significance	Test $\tau$	Freedom Degree	Level of Significance (Two Domains)
Extroversion	1.003	.317	1.491	398	.137

Based on the result of table 1 according to the similarity assumption of variances for the rate of extroversion the calculated t in the variance homogeneity conditions is not meaningful ( $t(398)=1.491$ ,  $P=0.137$ )

Third hypothesis: Openness to experience of normal individuals and individuals with irritable bowel syndrome is different

To analyze the significance of difference between averages of Openness to experience of normal individuals and people with irritable bowel syndrome independent t-test was used. Result is represented in table 3.

Table 3: result of t-test for analyzing Openness to experience of normal individual and irritable bowel syndrome

Variable	Test $\phi$	Level of Significance	Test $\tau$	Freedom Degree	Level of Significance (Two Domains)
Flexibility	.114	.735	1.472	398	.142

Based on the result of table 3 according to the similarity assumption of variances for the rate of extroversion the calculated t in the variance homogeneity conditions is not meaningful ( $t(398)=1.472$ ,  $P=0.142$ )

Hypothesis 4: Agreeableness of normal individuals and individuals with irritable bowel syndrome is different

To analyze the significance of difference between averages of Agreeableness of normal individuals and people with irritable bowel syndrome independent t-test was used. Result is represented in table 4.

Table 4: result of t-test for analyzing Agreeableness of normal individual and irritable bowel syndrome

Variable	Test $\phi$	Level of Significance	Test $\tau$	Freedom Degree	Level of Significance (Two Domains)
Agreeableness	.664	.416	1.845	398	.066

Based on the result of table 4 according to the similarity assumption of variances for the rate of extroversion the calculated t in the variance homogeneity conditions is not meaningful ( $t(398)=-1.845$ ,  $P=-0.066$ )

Hypothesis 5: Responsibility of normal individuals and individuals with irritable bowel syndrome is different

To analyze the significance of difference between averages of Responsibility of normal individuals and people with irritable bowel syndrome independent t-test was used. Result is represented in table 5.

Table 5: result of t-test for analyzing Responsibility of normal individual and irritable bowel syndrome

Variable	Test $\phi$	Level of Significance	Test $\tau$	Freedom Degree	Level of Significance (Two Domains)
Responsibility	2.647	.105	1.666	398	.096

Based on the result of table 4 according to the similarity assumption of variances for the rate of Responsibility the calculated t in the variance homogeneity conditions is not meaningful ( $t(398)=-1.666$ ,  $P=-0.096$ )

## DISCUSSION

A part of this research shows that the rate neurosis in the people afflicted with irritable bowel syndrome is more than normal individuals. This study is in line with the result of studies by [-12].

These findings showed that psychological factors beside physiological factors are influential in onset and exacerbation of active gastrointestinal disorders. Personality traits such as Neuroticism are a psychological factor that is posed to specify interactive disorders. Tendency toward experiencing negative anxieties such as stress and fear, anger and enmity, sorrow and sense of guilt and hate are the main components of neuroticism. Negative affectivity causes physiologic excitation of Nervous system continually. Enteric Nervous System is very sensitive to anxiety states, so that negative anxieties such as stress and anger cause some activities in intestine that can result in intestine symptoms like irritable bowel syndrome.

The research observations showed that there is relationship between tendency to control and suppression of anger and stomach pain and intestine activities after serving the food [14]. High neuroticism is along with weakness in compatibility, controlling impulses and resisting against stress and by the way sustainability of people increases against physical disorders [13]. Resisting strategies to see whether individual afflicts to health problems or not is very important. Someone who can control stress effectively less faces its unfavorable consequences. People who have a higher neuroticism instead of to the point contrasting strategies uses ineffective contrasting patterns of such as embodying [13]. These contrasting strategies in turn increase the possibility of afflicting Gastrointestinal Diseases such as irritable bowel syndrome. According to the findings of this research though there is no significant difference between the rate of extraversion in normal individuals and irritable bowel syndrome but the rate of extraversion in people afflicted with irritable bowel syndrome is lower than normal people.

Extroversion with characteristics such as tendency to investing energy on individuals and outside environment things instead of devoting to mental and internal activities, tendency to sensations and positive excitements, plurality, assertiveness, activity and being talkative. These features reinforce social abilities of extroversion and can cause increasing of the level of activities and social interactions, ability of establishing close relationships and having strong social support networks. All of these features and behavioral tendencies increase personal possibilities of extroversion people for resisting against problems and damaging situations. Now based on what has been stated about extroversion more research is needed in this domain to attain more precise results in this regard. The result of this inquiry showed that the difference between openness to experience and agreeableness between afflicted people to irritable bowel syndrome and normal people there is no significant relationship. These findings that are in line with the previous results of study of Besharat [14] can be specified so that features of these two personality traits are generally positive and non-damaging. Low or higher rate of openness to experience that is in line with features such as paying attention to internal sensations, diversity, ambition, curiosity, independence and openness to new experiences and ideas and values and do not entails intensive illnesses like irritable bowel syndrome. Similarly the rate of agreeableness that corresponds with the rate of feelings of sympathy, compassion, care, emotional support and cooperation of others necessarily does not end with irritable bowel syndrome. Comparison of features related to openness to experience and agreeableness with features of Neuroticism. For example their different effect on sustainability against disorders and illnesses.

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