

Personality Traits as Predictors of General Health among High school Female Students in Bandar Abbas

Hossein Zainalipour*, Mehdi Tayebisough, Maryam Adli and Alla Morad Tayebisough

University of Hormozgan, Bandar Abbas, Iran

* Corresponding author's Email: hzainalipour@yahoo.com; Tel: Tel: +98-09179606742

ABSTRACT: The current research has been performed due to evaluation of tie personality traits and general health. 205 students have been selected through multi stage random sampling. In order to collect data, NEO personality inventory (1985) and Goldberg & Hiller (1972) general health questionnaire have been applied. Research data were analyzed by Pearson's correlation and Regression analysis. The results have indicated that there is a positive and significant relationship between personality traits of extraversion, openness (flexibility), agreeableness, conscientiousness and general health of students and there is a negative relationship ($p < 0.05$) between Neuroticism and general health of students. Neuroticism predicts 0.452 % of variance of general health.

Keywords: Personality Traits, General Health, Female Students

ORIGINAL ARTICLE

INTRODUCTION

Successful systems of education in different levels, besides the various evaluations will dedicate some parts to measure mental & personality dimensions of students so that with considering the results and performing the necessary actions, support them to access academic achievement. Generally, educational programs should be provided in an appropriate mental condition that leads students to apply all their abilities (Dehghan, 2006).

General health means somatic, mental & social complete ease of individual that there is an effective and dynamic interaction between them. Therefore, mental health is a criterion for determining general health of people which means: feeling well and ensuring from effectiveness, competitive capacity, intergenerational belonging, potential self-actualization of intellectual, emotional and etc. (World Health Report, 2001).

In fact the concept of mental health is an aspect of general concept of health. Although, the word health is defined for us and has a clear meaning, nevertheless its defining is not easy and has various meaning for different people. By mental health we mean health of some parts of human such as intelligence, mind, mode and thought (Jamali, 2002).

Any person to enter the community and deal with different people and conditions is equipped to the tools such as mental structure and personal traits which can be useful (Judge, T. A., Jackson, C. L., Shaw, J. C., Scott, B. A., Rich, B. L., 2007).

It should be noted that in different situations and due to having different understanding and dealing, people react variously toward accidents and conflicts which are related to their personality traits. Some personality traits can have a significant role in etiology and progression of disorders. Traits of a person indirectly can cause disease through non-healthy behaviors such as smoking, using drugs, insomnia and malnutrition.

For instance, Meehl (1975), believes that those have low score in extraversion are prone to depression. Evaluations have indicated that personality traits can be considered as the most important factors in their compatibility and health. (Mc creia & Costa, 1986, Myers & Diener, 1995, Hayes & Joseph(2003), Nowadays, many researchers believe that five factor model of personality can increase our knowledge about traits and health. As each of the five main factors such as Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), Conscientiousness (C) can be considered as a set of compromising attributes that can help either people or group to achieve to their essential needs (Korotkov & Hannah, 2004). Five main dimensions can be considered between individual differences in personality traits.

1. Neuroticism: In description of dimensions of five factor model, the least disagreement is existed about definition of neuroticism. It shows the difference of people in anxiety level to experience. In this model, emotional stability and low anxiety is separated from emotional instability and high anxiety. Other features of this group include: Tendency to anxiety and aggression,

Depression, Timidity, Being Insecure, Precipitancy & Early Arousal (Mc cre a & Costa, 1992, McCrae, R.R.,, John, O.P, 1992, O Connor, M.C., Paunonen, S.V., 2007, Huver, R.M.E., Otten, R., Veries, H., Engelse, R.C.M.E., 2009).

2. Extraversion: The most important feature of this group is Predominate, Sensation Seeking, Active, Being Energetic, Being Intimate, sociable, and Being Intrepid. These people are sociable and community-oriented (Mc cre a & Costa, 1992, McCrae, R.R.,, John, O.P, 1992, O Connor, M.C., Paunonen, S.V., 2007, Huver, R. M.E., Otten, R., Veries, H., Engelse, R. C.M.E., 2009).

3. Openness: Openness of flexibility toward experience has been rarely seen in a society and as a factor in personality. These people are curious about outer and inner world. They have a rich life full of experience and are willing to accept new ideas and non-conventional values. They include protesting groups at school. Imagination, Aestheticism, Seeking Diversity are considered as other features of this group (Mc cre a & Costa, 1992, McCrae, R. R., , John, O.P, 1992, O Connor, M. C., Paunonen, S. V. , 2007, Huver, R. M.E., Otten, R., Veries, H., Engelse, R. C.M.E., 2009).

4. Acceptability or Compatibility: In one hand, they have features such as Altruism, Kindness, Lovemaking, Accompaniment & Humbling are and on the other hand, features such as Hostility, Malice, Jealousy, Competitiveness & Incuriosity to others (Mc cre a & Costa, 1992, McCrae, John,, 1992, Connor and Paunonen, 2007, Huver et al. 2009).

5. Responsibility: Volition is the best interpretation for responsibility. These people are responsible, have goal, volition, are determined, reliable, active, regular and accurate and have desire to succeed. (Mc cre a & Costa, 1992, McCrae and John, 1992, Connor and Paunonen, 2007, Huver, 2009).

In some studies, it was found out that extraversion is positively connected to the mental health of individual, whereas neuroticism has negative relation with mental health of people (Costa & McCrae, 1984; Schultz, 2000).

Hobbes & Joseph (2003) believe that after openness or flexibility, person will experience both positive and negative emotional state; therefore, there is no direct tie between flexibility and health. Longitudinal studies have revealed that those have higher score in agreeableness & conscientiousness in compare with those has lower score in this dimension, have more mental health (Schultz 2000). Research of Bernardo, M.; Gonzalez Gaultierrez, J. L.; Garrosa (2005), have indicated that personality, especially through extraversion and neuroticism, is considered as one of

the most important correlations of health and there is a positive relationship between flexibility and negative and positive affection. Mani (2004) has indicated in his research that there is a positive & significant correlation between extraversion personality and agreeableness with positive affection and happiness and also there is a negative and significant correlation with negative affection. However, there is a negative and significant correlation between neurosis with positive affection and happiness and there is a positive and significant correlation with negative affection.

In connection to the foregoing, objective of this research is determining the part of predictor variable of personality traits on general health of students and prediction of general health.

MATERIALS AND METHODS

In this research, correlation method has been applied. Statistical population of this research comprise of female student of secondary schools of Bandar Abbas in academic year of 2011-12. number 205 of students that were selected by multi stage random sampling have been evaluated. Furthermore, the following tools were used in this research:

Five-Factor Personality Questionnaire (NEO):

NEO personality questionnaire is short and revised form of test of NEO-PI-R and is considered as its alternative which was provided in 1985 by Pael. T, Costa & McCrae. R.R 91985) (Garooosi, 2001). This test includes 240 questions and have two forms of S (grading by self) & R (grading by others) which measures 5 main factors of personality and 6 specification of each factor and provide a comprehensive assessments from personality of person. It was translated, standardized and implemented by Garooosi (2001) in Iran. Short form of this test (NEO-FFI) which comprise of 60 questions are applied in this research and the questions are answered in five-points Likhert items as totally disagree, disagree, no idea, agree, totally agree and are replied by person himself.

McCrae & Costa (1983) have implemented NEO 60 Questions on 208 students within 3 months and have obtained reliability coefficient of 0.83, 0.75, 0.80, 0.79, and 0.79 respectively for N, E, O, A & C factors. (Garooosi 2001) Roushan & et al (2006) also, attained the Cronbach's Alpha of this test in range of 0.72 for flexibility and to 0.87 for neuroticism. Mani's research (2004), have indicated that reliability of test within two weeks for this test measures is obtained between 0.86 and 0.90 and range of coefficient of internal consistency is reported 0.68 to 0.86. Most researches confirmed

validity of this research by using correlation form of S & R (Garooosi 2001). McCrae & Costa (1989) stated about validity of test that short form of NEO-FFI is an exact match with its complete form and the correlation is determined more than 0.68. Kiamehr (2002), in his research which was performed on university students of Tehran, has obtained the correlation coefficient of this test with NEO 240 questions test for 5 factors respectively 0.75, 0.91, 0.71, 0.78, 0.75.

General Health Questionnaire:

This questionnaire was provided by Goldberg & Hiller (1972), and standardized by Homan (1996), on Bachelor’s Degree students of Tarbiat Moallem University of Tehran. Questions were replied based on four-points Likhert Items. (It should be noted that high scores in this test indicates the low health condition of individual, therefore in description of correlations, this matter should be considered) 28 questions questionnaire of general health which is also used in this research, has four sub-scales of Somatic, Anxiety & Sleep Disorder, Impairment in Social Functioning and Depression symptoms.

The question have arranged in order in a way that questions 1-7 are somatic symptoms, 8-14 are anxiety and sleep disorder, 15-21 are impairment in social functioning and 22-28 are depression symptoms. From sum of scores of these 4 sub-scales, one total score will be obtained for health of individual. (Garooosi 2001), the best and most appropriate method for scoring is applying Likhert method with scores of (0, 1, 2, and 3). In scoring, 4 scores is related to the subsidiary scales and 1 score to all items of questionnaires. Score 23 and higher indicate the non-mental health and score lower than 23 indicate mental health. (Mohammadi 2006), In Ahmadian research (2005), reliability of test through Cronbach’s Alpha coefficient for sub-scales of Somatic, Anxiety & Sleep Disorder, Impairment in Social Functioning and Depression symptoms and total scale of mental health is respectively 0.77, 0.77, 0.48, 0.85 & 0.90. Validation of this questionnaire is performed by Haghighi & et al by using total score of SCL-90-R which the coefficients were respectively 0.84, 0.85, 0.72, and 0.72 (Ahmadian, 2005).

Questionnaires of personality and general health have been completed by individuals who last 40 days.

RESULTS

In order to describe the sample group, some of the demographic characteristics are expressed bellow:

As it can be seen in table 1, frequency, percent and cumulative percent of students are determined

based on field of study. 1st grade students (general) who are 68 dedicated 33.17 % and the highest percent of total sample. Humanities students who are 57 dedicated 27.80 %, natural science students who are 45 dedicated 21.95 % and mathematics students who are 35 dedicated 17.07 % of total sample of research.

Table 1. Frequency, Percent & Cumulative Percent

Field	Frequency	Percent	Cumulative Percent
1 st Grade General	68	33.17	33.18
Humanities	57	27.80	60.97
Natural Science	45	21.95	82.92
Mathematics & Physics	35	17.07	100
Total	205	100	

As it can be seen in the table 2, conscientiousness has the highest average (30.69) and neuroticism has the lowest (22.33) average among the students.

Social functioning has the highest average and depression the lowest one. Therefore, statistical population of this research shows their most problems in social functioning and the least one in depression.

Table 2. Descriptive Indicators of Scores of Different Personalities (n=205)

Index Statistics	Average	Standard Deviation
Neuroticism	22.33	8.65
Extraversion	27.71	6.93
Openness	28.89	5.78
Agreeableness	28.11	5.85
Conscientiousness	30.69	7.54

Table 3. Descriptive Indicators of Scores of General Health (n=205)

Index Statistics	Average	Standard Deviation
Social Disorder	6.05	4.25
Anxiety	5.78	4.47
Impairment in Social Functioning	8.67	3.57
Depression	3.50	3.94
Total of General Health	24.02	14.12

Table 4. Results of Correlation Coefficient of Personality Dimensions with General Health (n=205)

		General Health
Neuroticism	Pearson Correlation	0.672
	Determination Coefficient	45.2
	Significance Level	0.001
	N	205
Extraversion	Pearson Correlation	-0.369
	Determination Coefficient	13.62
	Significance Level	0.001
	N	205
Openness	Pearson Correlation	-0.238
	Determination Coefficient	5.66
	Significance Level	0.001
	N	205
Agreeableness	Pearson Correlation	-0.404
	Determination Coefficient	16.32
	Significance Level	0.001
	N	205
Conscientiousness	Pearson Correlation	-0.235
	Determination Coefficient	5.52
	Significance Level	0.001
	N	205

The results have indicated that calculated correlation coefficients of all the personality dimensions with general health are significant in lower level of $p < 0.01$. It can be concluded that there is a positive and significant relationship between neuroticism and general health. As it was said earlier, positive correlation in GHQ questionnaire means that the relationship is reversed. Consequently, by increasing neuroticism feature in people, their general health will jeopardize and vice versa. Also there is a negative and significant relationship between extraversion, flexibility, agreeableness and consciousness with general health which with considering the reversion of scores of general health questionnaires can be concluded that

with increasing the extraversion, flexibility, agreeableness and consciousness, general health will increase and vice versa. Calculated determination coefficient indicates that neuroticism (45.2), extraversion (13.62), flexibility (5.66), agreeableness (16.32) and consciousness (5.52) will provide the aforesaid percent of variance of general health.

To answer this question that what extent of variance of student's general health is provided by their personality dimensions, step by step regression method have been applied. To do this, variable of general health as criterion and personality dimension as predictor variable have entered to this model. The results are presented in table 5 and 6.

Table 5: Summary of Results of Significant Regression for Predicting General Health of Students

Variable	R	R ²	Revised R ²	Standard Error	F	Df	Significance Level
Neuroticism	0.672	0.452	0.45	0.06	9.66	203	0.002

Table 6: Summary of Regression Coefficients Table

Variable	Non-standard coefficient		Standard value of β	Value of t	Significance level
	Value of b	Standard Error			
Y-intercept	-8.63	11.60		-0.74	0.45
Neuroticism	0.78	0.06	0.63	3.10	0.002

The results shows that among 5 personality traits, only neuroticism entered to regression model and it could provide 0.452 % of variance of general health variable.

DISCUSSION

The current research has been performed with objective of evaluation of ties between personality traits and general health of female students of secondary schools of Bandar Abbas and prediction of their health on personality dimensions. The results of hypothesis of research with Pearson correlation indicate that there is a positive and significant correlation between neuroticism and general health and negative and significant correlation between extraversion, flexibility, agreeableness and responsibility with general health. In the other word, it can be cited that increasing the scores of neuroticism will be accompanied with disorders in any somatic, anxiety, social and depression fields. So, by increasing personality traits of extraversion, flexibility, agreeableness and responsibility, scores of students will decrease in all subscales of general health. It means that whatever a person's score is higher; he/she will enjoy higher general health either.

The results of this research is in the same line with performed researches by Hobbs and Joseph (2003), Costa & McCrae (1986), Costa & McCrae (1991), Bernard et al (2005), Donio & Cooper (1998), Kerotkof & Hana (2004), Shay & et al (2002), Forenham & Chang (2000), Mani (2004), Peneli & Tokoma (2002), Val Ras & Targersen (1999) which indicate that health is in relationship with low level of neuroticism and high level of extraversion with agreeableness & consciousness. Other researches performed by Hilz & et al (2001), Pauol and Ashton (2001) and Grohel (2005) confirmed this research as well. Considering the fact that those other factors in neuroticism in personality five factor models are anxiety, aggression, depression, self-concern, impulsiveness and vulnerability (Garooosi 2001), relationship of this dimension with low health level of individuals in all dimensions will be logical. Happiness has negative correlation & grief and depression has positive correlation with OCD. (Dinio & Cooper 1998) Also it is possible that those who has OCD, in dealing with conflicts use brave, audacious and hurriedly approaches and their approaches in compare with healthy people are more effective. Consequently this raises their stress and jeopardizes their general health (Kardum & Krapic 2001).

The results of regression have indicated that among five personality traits, only neuroticism entered

into the regression model which provided 0.452 % of variance of general health variable.

Nevertheless, due to the fact that statistical population of research were only female students of Bandar Abbas, there is difficulty in generalizing findings of research to the entire population and other students of the country. Since data collection has been performed by questionnaire, there is no certainty about accuracy and truth of responses. Performing research by applying questionnaire has its associated disadvantages. To evaluate accurately, it is recommended to use long form of NEO questionnaire (240 questions) and other tools of health, performing longitudinal research about research variables in order to study effective factors in general health of people such as behavior and method of raising child, family environment and society, effects of stress and life accidents.

The studies conducted using statistical method for regression analysis of a number of variables on the examined variable has shown that the predictive variables can justify and explain approximately 63% of the criterion variable variance. The result of this analysis indicates that the variable mean of GPA of the 1st and 2nd grade of high school with beta value of 0.422 significantly plays the major role in predicting and explaining the criterion variable. Also, the variable GPA of the 3rd grade of guidance school with beta value of 0.174 significantly plays the minor role in predicting and explaining the criterion variable. The results of the researches which have been carried out formerly corroborate the results of this study. In introduction section, the results of these studies have been discusses. For example, the results of the study conducted by Skalvin and Hatgut (1990), Migery (2002), Alex *et al* (1993), Petit (2002), Peterich and Schunk (1996), Harter (1999), Wokfulk (2004), Anderson and Burke (2000), Perterich and de Grute (1990) worldwide, also, the results of the studies carried out in Iran such as Biabangard (2005), Hasanzadeh (2002), Jamshidi (1998), Rafiyian (2000), Sheikhipini (1994) support and confirm the positive and significant relation between the predictive variable educational progress motivation and the criterion variable.

For instance, Peterich and Schunk (1996) in their research have indicated that motivation is one of major factors in human learning and performance. Harter (1999) has emphasized on the role of internal motivation and shown that the students who are internally motivated have better educational performance in compassion with those who are externally motivated. Rafiyian (2000) has indicated the

positive and significant relation between motivation and educational performance.

Fuller (1986) and Fuller and Hyneman (1989), Alex et al (1993 Sewell and Shan (1967), Pittman (1968), Guartez and Gerguard (2004), Katergie (2003) in other countries and Puladi (1996) and Seif (2008) in Iran have corroborated the positive and significant relation between the individual factors and the inner-institute factors such as entrance exam scores, IQ, aptitude, and the students` GPA of former grades as the predictive variable and the criterion variable.

For example, Fuller (1986) in examining the inner0scholl factors affecting the students` educational performance has concluded that school and its related factors, independent from the family background, are highly influential on the learners` educational progress in the third world. Safavi (1986) quotes from article of *American Journal of Educational Researches* published in 1985 "educational factors related to school are the major cause of leaving high schools". Approximately one third of the dropouts attributed leaving schools to being not good at the lessons".

Sewell and Shan (1967) in examining the effect of individual factors on educational failure have concluded that aptitude, as it is important in calculating educational failure, is also related to students` staying at high school. The data analysis in this research showed that in general the students with higher educational progress motivation score (the predictive variable) had higher written GPA in the final exams compared with the students with lower scores of educational progress motivation. In addition, the students with higher entrance exam score and GPA of the 3rd grade of guidance school and higher mean of GPA at the 1st and 2nd grade of high school managed to get higher final GPA compared to their classmates lacking these features. The remaining role in explaining the criterion variable is related to the unknown factors out of the range of this research.

Considering the considerable effect of the mentioned variables on predicting the criterion variables (the written final GPA of the 3rd grade students of the high schools in Hormozagan) it seems that the authorities of education in the province and the cities can regulate and execute their annual and operational programs with adopting executive strategies in a way that enable the educational activities and teaching processes to enhance the factors and predictive variables above. In this case, it is expected that a fundamental change is needed in educational quality in these high schools in order to enhance the students` educational performance. Achieving this goal entails

revising the management, teaching methods, student accepting policy, the educational assessment and the executive programs in these high schools.

The biggest role in predicting and explaining the criterion variable belongs to the variable mean of GPA of the 1st and 2nd grade of the high school and the slightest role belong to the variable GPA of the 3rd grade of guidance school. Regarding the fact that the GPA is 50 % considered in accepting the candidate for entering the high schools and calculating the score of the test, taking this issue into the account and reviewing it by the authorities seems to be absolutely essential. With regard to the considerable effect of the variables entrance exam score, GPA of the 3rd grade of guidance school and the mean of the GPA of the 1st and 2nd grade of the students of the high schools (predictive variables) on explaining the criterion variable (the written GPA of the 3rd grade of high school), the degree of observing the scientific standard for educational assessment and evaluation in the process of designing, performing and declaring the result of these exams by the state authorities should be reexamined and revised. Also, with regard to the effect of educational progress motivation score (0.245) on explaining the criterion variable, to increase the students` internal motivation and guide their education, special educational workshops should be frequently held by education departments with presence of accomplished psychologists and advisors and the successful and top-notch students be introduced and praised in these workshops. The educational authorities of the province should invite the authors of the textbooks and the skilled experts of designing standard questions in form of in-service training so that their teaching and question designing skills as well as the skills concerning the methods of holding standard tests may be improved. In addition, the educational leaders of different lessons should supervise the teaching practices and question designing in the schools.

Since at each educational grade different factors affect the desired educational performance, the results of this study may be difficult to be generalized about other educational grades. Lack of awareness of the individual characteristics of the students in the statistical samples was one of the limitations of this study. Improper conditions, lack of adequate equipment and facilities, the high school students` cultural background have different impacts on the studied variables. These factors are worthy to be considered in applying the results of this study to all the high schools in the province.

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