Original Article

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The relationship between personality traits, mental health and quality of life in people with thalassemia

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Abstract

Background: General health is related not only to physical illness but also to mental and social conditions including personality traits and the quality of life. The main objective of the current study was to investigate the relationship between five main personality factors, quality of life, and mental health in patients suffering from thalassemia.

Materials and Methods: The current study was a correlative one. The convenient sampling method was used to select 40 people suffering from thalassemia major and 40 people suffering from thalassemia minor (age:15-18 years old). In order to gather the required data, questionnaires of general health (GHQ), quality of life, and NEO five-factor inventory (NEO-FFI) were used. The acquired data were analyzed using step-wise regression using SPSS (version 20).

Results: Multiple regression analysis indicated that personality traits and components of quality of life can predicte variables for the variance and mental health. .For example, 13 percent of the variance for the general health variable was explained based on the linear combination of the two variables of personality and quality of life. Neuroticism explained 26 percent of the variance for the variable of anxiety and sleep disorder and conscientiousness accounted for 36 percent of that variance. Mental health explained 20 percent of the variance for the component of social action and mental health explains 19 percent, social relations explains 23 percent, and environmental health explained 26 percent of the variance for the variable of depression

Conclusion: The results showed that there was a relationship between components of quality of life and personality and the components of general health

Key Words: General health, Personality, Thalassemia, Quality of life

Introduction

Thalassemia is considered as the most common group of single-gene disorders in the world (1). This illness is in a group of inherited blood disorders which is the result of faults in synthesizing one or more hemoglobin chains. The lack of hemoglobin balance will lead to emaciated red globules and hematopoietic disorders (2). Depending on the extent of the disorder and the type of disorder in the hemoglobin chains, different types of this illness will manifest. For instance, thalassemia minor involves the reduced output of only one beta gene site while thalassemia major is due to the inherited output reduction of both sites governing the synthesis of the hemoglobin chain (3). Nowadays, using different courses of treatment, thalassemia patients can have a very long lifespan. Along with prolonged life, they also need a lot of changes and alterations including consistent and professional training and education. As a study in India indicated, thalassemia is very stressful and the patients have to deal with a lot of different physical, mental, and social complications, which shows the need for a multi-faceted treatment for the disease (4). The chronic nature of this disease is a major emotional problem which intensifies in each development

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phase and its complications increase as patients gain age (5). Accordingly, it was reported in a study that people suffering from thalassemia have a dysphoric mood and low self-esteem (6) and they don't have optimal mental health (7). It is nearly impossible to perfectly define mental health among different societies and cultures, but at least there is a consensus that mental health is far beyond the lack of mental disorders. In the statute of world health education, the concept of mental health includes welfare coordination among physical, mental, and social factors as well as self-efficacy perception, independence and autonomy, adequacy and competency, and so on (8). Among the main variables which can influence mental health, quality of life and personality traits can be mentioned. The concept of quality of life involves physical aspects (an individual's perception of physical status), mental aspects (an individual's perception of his or her emotional and cognitive status), social aspects (an individual's perception of inter-personal relations and his or her social role in life), and environmental aspects. Due to the duration and intensity of chronic illnesses, different aspects of quality of life will significantly change (9). It is believed that quality of life in people suffering from this illness is lower than normal people because they are faced with different complications in their lives including regular visits to the hospital, painful injections, their appearance, lack of sexual development, infertility, the side-effects of the illness, lack of certainty about the future, and problems related to employment and playing their roles in the society (10). Even the negative impact of thalassemia is evident in their education. As concluded in a study, thalassemia patients are not satisfied with their body image and the teenagers are worried about their future health and education (11). In five interviews Geordanda did with five thalassemia patients, it was concluded that this illness had had a negative impact on their image of themselves and almost all of them were worried about being rejected and ridiculed by others because of their appearance (12). Moreover, due to the nature and intense effects of the illness, self-esteem among the patients is endangered and the risk of depression will increase (5). Therefore, there is a relationship between quality of life and mental health (13). As indicated in a study, treatment plans based on improving the quality of life will reinforce the mental health of these patients (14). Another variable affecting the mental health is personality which is considered as one of the factors predicting mental health (15). Personality has been defined as the internal organization of emotional, cognitive, and conceptual systems of an individual, which determines the unique responses of the individual to the environment (16). One of the theories related to the personality aspects is the five-factor personality model of Robert McCrae and Paul Costa. The five-factor personality model categorizes people based on five aspects of Neuroticism, Extroversion, Conscientiousness, Agreeableness, and Openness to experience. Based on this model, each individual can have a different attitude and tendency towards different aspects of life based on their personality characteristic. In a study, it is reported that the neuroticism trait has a positive and significant relationship with anxiety and depression symptoms (17). In fact, personality traits including sensitivity to false beliefs, weak impulse control, and tendency to psychological distress experience are mainly manifested in the shape of anxiety, anger, depression, embarrassment, hatred, and a negative spectrum of emotions (18). Therefore, it is possibly one of the variables affecting mental health. On the other hand, although previous studies have investigated the relationship between mental health, personality, and quality of life separately, all these variables have not been considered together in a predicting model.

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Moreover, no studies have investigated these factors in thalassemia patients. Therefore, considering the importance of the component of mental health level and its multi-faceted relationship with the components of quality of life and personality, assessing the status of thalassemia patients for each one of these components separately and in relation to each other seems necessary to identify those aspects most influenced by this illness. Hence, the current study tries to investigate the relationship between quality of life and personality and mental health in people suffering from thalassemia major and minor.

Materials and Methods

The scheme used in this study was a fundamental and correlative one which investigated the relationship between personality and quality of life and the general health of people suffering from thalassemia minor and major. The research population for the study included the thalassemia patients admitted to Shahid Sodoughi Hospital in Yazd, Iran. The statistical sample includes 80 participants, with 40 individuals suffering from thalassemia major and 40 individuals suffering from thalassemia minor.

Entrance criteria for the study

1. Aged between 15 and 18 years
2. The participants must had finished fifth grade, at least.
3. No prior psychosis, depression or borderline disorders
4. Intact auditory, visual, and physical health

Both groups are matched considering age, education level, gender, with no history of psychological illnesses.

Sampling method

The convenient sampling method was used. Among the people admitted to the hospital, 40 participants suffering from thalassemia major and 40 participants suffering from thalassemia minor which were selected based on their medical records and the tests carried out for them.

Research Tools

1. General Health Questionnaire (GHQ)

The general health questionnaire with 28 questions was proposed by Goldberg and Hiller (1979) and it has four subscales as follows:

- Scale for physical symptoms
- Scale for anxiety and sleep disorder symptoms
- Scale for social functions
- Scale for depression symptoms

Options presented for each question are never, regularly, almost often, and too much and each option gets a score of 0 to

3. By calculating the sum of scores in each scale, the score of that scale will be obtained and by adding the scores of different scales, the total score of general health is calculated for each individual. Each scale includes 7 questions and the maximum score for each scale is 21 and the total score is 84, with the higher score indicating lower general health level (19). In order to assess the general health of the participants, the general cutoff point of 23 and the cutoff point of 6 for each one of the scales were considered, Nourbala et al. (20) indicated that the sensitivity and characteristic values of this questionnaire in its best cutoff point, 23, were 70.5 and 92.3 percent, respectively. The reliability and validity of this questionnaire have been confirmed in different studies. The reliability coefficient for the entire general health questionnaire was 96 percent and Cronbach's Alpha coefficient was 90 percent (20).

Quality of Life Inventory

This questionnaire was used for measuring the quality of an individual's life in the loast two weeks. It was developed in 1989 by the World Health Organization (WHOQOL-BREF) working with 15 international centers. It has 24 questions in 4 domains. The first two questions do not belong to any domain and these two

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questions evaluate the health status and quality of life in a general sense. Therefore, the questionnaire has 26 questions involving the following domains:

- Physical health domain
- Psychological domain
- Social relationship domain
- Environmental domain

The score for each item ranges from 1 to 5 indicating never, a little, average, a lot, and completely, respectively; or very unsatisfied, not satisfied, relatively unsatisfied, satisfied, completely satisfied, and the like. Cronbach's Alpha coefficient for the four subscales and the entire questionnaire have been reported in the range of 0.73 to 0.89. In Iran, Nasiri (2006) used three methods of test-retest in

a three-week period, half splitting reliabilities, and Cronbach's Alpha to measure the reliability of the questionnaire which yielded 0.67, 0.87, and 0.84, respectively. Moreover, the reliability of the quality of life scale was measured by Rahimi (2007) and the Cronbach's Alpha coefficient for the entire scale was 0.88, for the physical health it was 0.70, for the mental health it was 0.77, for social relations it was 0.65, and for the quality of living environment it was 0.77. Nasiri (2006) used concurrent validity method for determining the validity of the questionnaire and measured the relationship between the total score of the test and its subscales and the total score of the general health questionnaire and its subscales using correlation coefficient (20).

NEO Five-Factor Personality Inventory NEOPI-R questionnaire is a personality test developed based on factor analysis and it is considered one of the newest tools in the field of personality. It was proposed under the name of NEO personality inventory by McCrae and Costa in 1985. The adjusted form of this inventory by the same authors was proposed as the adjusted form of the NEO personality inventory.

The long version of the questionnaire is designed using 240 items to measure the five main factors or domains of neuroticism, extroversion, agreeableness, conscientiousness, openness to experience. Moreover, this questionnaire has another version called NEO-FFI which includes 60 questions used for evaluating the five main factors of personality. In the 24-question version, each factor has 6 levels or subscales; while, in the shorter version, each factor is measured using 12 questions.

The longer version of this questionnaire has been validated in many countries including Iran.The shorter version of the questionnaire has not been yet validated in Iran; however, the results of the studies carried out by McCrae and Costa (21) show that the correlation of the 5 subscales of the shorter version with the longer version ranges from 0.77 to 0.92. Furthermore, the internal consistency of its subscales ranged from 0.68 to 0.86.

The scoring method for the questions is a Likert spectrum of completely disagree (0), disagree (1), no opinion (2), agree (3), and completely agree (4). Some of the questions are scored inversely, as shown in the following Table I.

Results

All clinical and para clinical data are Since the main objective of the current study was to explain the variance of the dependent variable, general health, and its components (anxiety and sleep disorder, physical symptoms, social action, and depression), the share of each one of the independent variables of the quality of life (the components of physical health, mental health, social relations, and environmental health) and personality (the components of extroversion, neuroticism, openness to experience, agreeableness, and conscientiousness) will be determined in a concurrent regression analysis and the share of each one of their components in determining the variance of the general health variable and its components will be

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investigated using a step-wise regression analysis.

In the first regression analysis, in order to explain the variance of the general health variable as a dependent variable, the variables of personality and quality of life were entered into the regression equation as independent variables.

Table II presents the coefficients related to the regression analysis of the general health variable on the variables of personality and quality of life. Based on the results presented in Table I, and the amount of the coefficient of determination, 13 percent of the variance for the general health variable is explained based on the linear combination of the two variables of personality and quality of life.

Considering the coefficients in Table II, the relationship between the variable of personality and general health is positive but insignificant and the relationship between quality of life and general health is negative and significant ($p<0.01$).

In the second regression analysis, in order to determine the variance of the components of anxiety symptoms and sleep disorder, as the dependent variables, the variable of neuroticism (personality) and conscientiousness (personality) were entered into the regression equation as the independent variables.

As can be seen from Table III, neuroticism explains 26 percent of the variance for the variable of anxiety and sleep disorder and conscientiousness explains 36 percent of that variance and considering the value of F and the significance level, this is a significant relationship.

In the third regression analysis, in order to explain the variance of the physical symptoms component as the dependent variable, the variable of neuroticism (personality) and physical health (quality of life) were entered into the regression analysis as the independent variables.

As can be seen from Table Iv, neuroticism explains 25 percent and physical health explains 31 percent of the variance for the component of physical health and considering the value of F and the significance level, this is a significant relationship.

In the fourth regression analysis, in order to explain the variance of the component of social action as the dependent variable, the variable of mental health (quality of life) has been entered into the regression equation as the independent variable.

The results in Table V indicate that mental health explains 20 percent of the variance for the component of social action and considering the value of F and the significance level, this is a significant relationship.

In the fifth regression analysis, in order to explain the variance of the depression component as the dependent variable, the variable of mental health, social relations, and environmental health (quality of life) have been entered into the regression equation as the independent variables.

The results of Table VI show that mental health explains 19 percent, social relations explains 23 percent, and environmental health explains 26 percent of the variance for the variable of depression and considering the value of F and the significance level, this is a significant relationship.

In the sixth regression analysis, in order to explain the variance of the general health variable as the dependent variable, the variables of neuroticism (personality) and environmental health (quality of life) have been entered into the regression equation as the independent variables.

The results presented in Table VII indicate that neuroticism explains 14 percent and environmental health explains 19 percent of the variance for the variable of general health and considering the value of F and the significance level, this is a significant relationship.

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Table I: Results of Variance Analysis Regarding Concurrent Regression of General Health Variable and Variables of Quality of Life and Personality

Measure source	Degree of Freedom	Sum of Squares	Mean Square			F Ratio	Significance Level
Regression	2	1261.77	630.88	0.37	0.13	5.94	0.004
Remaining	77	8181.05	106.24				

Table II: Coefficients Related to Regression Analysis of General Health Variable on Variables of Personality and Quality of Life

Variables	B	Beta Coefficient		Significance Level
Personality	0.08	0.13	1.23	0.22
Quality of Life	-0.24	-0.32	-2.99	0.004

Table III: Regression Analysis of Anxiety and Sleep Disorders Variable Based on Neuroticism and Conscientiousness Variables

Variable	Measure source	Degree of Freedom	Sum of Squares	Men Square	Beta Coefficient	Coefficient of Determination	F Ratio	Significance Level
Neuroticism	Regression	1	404.22	404.22	0.57	0.26	28.51	0.001
	Remaining	78	1105.76	14.17				
Conscientiousness	Regression	2	546.71	273.35	-0.31	0.36	21.85	0.001
	Remaining	77	963.27	12.51				

Table IV: Regression Analysis of the Variable of Physical Symptoms Based on Variables of Physical Health and Neuroticism

Variable	Measure Source	Degree of Freedom	Sum of Squares	Mean Square	Beta Coefficient	Coefficient of Determination	F Ratio	Significance Level
Neuroticism	Regression	1	183.37	187.37	0.36	0.25	26.23	0.001
	Remaining	78	557.11	7.14				
Physical Health	Regression	2	235.08	117.54	-0.29	0.31	17.76	0.001
	Remaining	77	509.39	6.61				

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Table V: Regression Analysis of the Variable of Social Action Based on the Variable of Mental Health

Variable	Measure Source	Degree of Freedom	Sum of Squares	Mean Square	Beta Coefficient	Coefficient of Determination	F Ratio	Significance Level
Mental Health	Regression	1	296.51	296.51	0.45	0.20	20.36	0.001
	Remaining	78	1135.47	114.55				

Table VI: Regression Analysis of the Depression Variable Based on Variables of Mental Health, Social Relations, and Environmental Health

Variable	Measure Source	Degree of Freedom	Sum of Squares	Mean Square	Beta Coefficient	Coefficient of Determination	F Ratio	Significance Level
Mental Health	Regression	1	384.72	384.72	-0.53	0.19	19.92	0.001
	Remaining	78	1505.76	19.30				
Social Relations	Regression	2	476.66	238.33	-0.33	0.23	12.98	0.001
	Remaining	77	1413.81	18.36				
Environmental Health	Regression	3	559.98	186.66	24	0.26	10.66	0.001
	Remaining	76	1330.50	17.50				

Table VII: Regression Analysis of the General Health Variable Based on Variables of Neuroticism and Environmental Health

Variable	Measure Source	Degree of Freedom	Sum of Squares	Mean Square	Beta Coefficient	Coefficient of Determination	F Ratio	Significance Level
Neuroticism	Regression	1	1370.60	1370.60	0.30	0.14	13.24	0.001
	Remaining	78	8072.20	103.49				
Environmental Health	Regression	2	1823.77	911.88	-0.23	0.19	9.21	0.001
	Remaining	77	7619.02	98.94				

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Discussion

The current study tried to investigate the relationship between quality of life and personality and the component of general health. The results of the step-wise regression indicated that among the components of personality, neuroticism and conscientiousness significantly explained the components of anxiety and sleep disorder of the general health among the thalassemia patients. In line with these results, the results of two studies report that neuroticism is the most important predictor for general health (22, 23). In order to explain this finding, it can be said that neuroticism is accompanied with anxiety and negative emotions (24) and lower levels of happiness. In contrary, due to its relation to success, conscientiousness is accompanied by higher levels of happiness (25). Since there is a correlation between happiness and mental health, it is not surprising that these two components are considered as the predictors for general health. Moreover, people scoring high for neuroticism utilize strategies for coping with emotion-based stress and considering the coping methods, these people participate in passive and inappropriate methods while those who score higher for conscientiousness avoid passive coping styles (26). These inappropriate coping mechanisms have a positive correlation with the measures of health problems (27). Moreover, among people suffering from thalassemia, utilizing inappropriate coping styles is more common and these people experience high levels of stress (28, 29). Therefore, personality aspects influence the way individuals deal with stressful situations, which is in turn influential in determining the mental health of thalassemia patients.

Furthermore, the neuroticism variable predicts another aspect of general health; namely, physical symptoms. Previous research reports that people scoring high for neuroticism are more likely to complain about physical problems which do not even have a medical basis (30). One of the reasons behind this relationship may be that neuroticism leads to higher levels of experiencing stressful factors and lower levels of social support (30). Furthermore, this very trait is the most powerful predictor of happiness and since there is a positive correlation between happiness and physical health, the more people feel happy, the higher physical health they will experience (25), so it is not surprising that these people feel less physically healthy.

Furthermore, the results of the regression indicated that quality of life was another component influencing mental health in a way that among the components of quality of life, the component of health predicts the social action component and the components of social relations, mental health, and environmental health predict the component of depression among the components of general health among the thalassemia patients. In line with these results, a study reports that the components of quality of life are good predictors for mental health among physically disabled people (31). The number of studies directly investigating the impact of each individual component of quality of life on the components of mental health is limited, but since one of the measures of environmental health is the leisure activities, this factor is related to reducing the level of depression among adults (32). Another measure for environmental health involves financial supports. Thalassemia patients are faced with different situations in their lives such as socio-economic complications (28). People suffering from thalassemia also suffer from undesirable social status including family conflicts and lower levels of social interactions since their physical status hinders them from active participation in everyday life and social relations; even finding new friends is a problem because of their inability to participate in everyday activities (4). This lower level of environmental health and reduced social relations can predict emotional inconsistencies such as depression. As reported, the most common

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mental complication of people suffering from this illness in assessing the general health is depression (7). In line with these results, another study concludes that among the thalassemia patients, quality of life is related to depression (33). Considering these results, the findings of the current study suggesting that quality of life predicts mental health seems rational.

Conclusion

Based on the results obtained in identifying the factors affecting the general health of thalassemia patients, personality traits and quality of life are of significant importance in a way that some of the components of personality and quality of life can predict general health among people suffering from thalassemia. Therefore, in providing care for these patients, it is necessary to not only care for their physical needs but also to consider their mental status since it affects their quality of life so that we can provide a good plan for improving their mental health. One of the limitations of the current study was the type of the tools used for measuring the components, considering the nature of the self-reporting measures, it is recommended to use other evaluation methods along with this measuring strategy. Considering the fact that the current study had a correlative nature, the relationship between the variables cannot be considered a causal relationship so it is recommended that attention be paid to this issue in future studies.

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Conflict of interest statement

The authors declare that they have no conflict of interest.

References

1. Weatherall, D. J. The thalassaemias: the role of molecular genetics in an evolving global health problem. Am J Hum Genet, 2004; 74. doi: 10.1086/381402

2. Muncie, H. L., & Campbell, J.Alpha and beta thalassemia. American family physician. 2009; 80(4), 339-344

3. Nathan, D. G., & Gunn, R. B. Thalassemia: the consequences of unbalanced hemoglobin synthesis. The American journal of medicine. 1966; 41(5), 815-830.

4. Roy, T., & Chatterjee, S. C. The experiences of adolescents with thalassemia in West Bengal India. Qualitative Health Research. 2007; 17(1), 85-93

5. Kiani, J., Pakizeh, A., Ostovar, A., & Namazi, S. Effectiveness of cognitive behavioral group therapy (CBGT) in increasing the self esteem & decreasing the hopelessness of β-Thalassemic adolescents. ISMJ. 2010; 13(4), 241-252.

6. Sherman, M., Koch, D., Giardina, P., Hymowitz, P., Siegel, R., & Shapiro, T. Thalassemic children's understanding of illness: a study of cognitive and emotional factors. Annals of the New York Academy of Sciences. 1985; 445(1), 327-336.

7. Naderi, M., Hormozi, M. R., Ashrafi, M., & Emamdadi, A. Evaluation of Mental Health and Related Factors among Patients with Beta-thalassemia Major in South East of Iran. Iranian journal of psychiatry. 2012; 7(1), 47-51.

8. World health organization's quality of life group. Measuring quality of life; development of the world health organization quality of life instrument (WHOQOL). 1992.

9. Kourkoutas, E., Georgiadi, M., & Plexousakis, S. Quality of life of children with chronic illnesses: A Review of the Literature. Procedia-Social and Behavioral Sciences. 2010; 2(2), 4763-4767.

10. Ware Jr, J. E., & Sherbourne, C. D. The MOS 36-item short-form health survey (SF-36): I. Conceptual framework

[Downloaded from ijpho.ssu.ac.ir on 2024-03-29]

and item selection. Medical care. 1992; 473-483

11. Khurana, A., Katyal, S., & Marwaha, R. K. Psychosocial burden in thalassemia. The Indian Journal of Pediatrics. 2006; 73(10), 877-880. doi: 10.1007/BF02859278

12. Georganda, E. T. The Impact of Thalassemia on Body Image, Self-Image, and Self-Esteem. Annals of the New York Academy of Sciences. 1990; 612(1), 466-472.

13.Shakerinia, I. [Relationship examination of noise perception, Psychological Hardiness and Mental Health with Psychological Hardiness and Mental Health with the Quality of life in Inhabitants of Rasht bustle Area (Persian)]. Iranian Journal of Health and Environment. 2001; 3(4), 475-484

14.Ghasemi, N.-a., Kajbaf, M.-B., & Rabiei, M. [The Effectiveness of Quality Of Life Therapy (QOLT) on Subjective Well–Being (SWB) and Mental Health(Persian)]. 2011; 2, 3(2), 23-34.

15.Forouzanfar, F., Nadi, M. A., & Molavi, H. Investigation the Relationship among personality characteristics, burnout and marital disenchantment with mental health in nurses in Isfahan City. 2010.

16. Dole, C., & Schroeder, R. G. The impact of various factors on the personality, job satisfaction and turnover intentions of professional accountants. Managerial Auditing Journal. 2001; 16(4), 234-245.

17. Daneshparvar, H. Personality Traits and their Impacts on the Mental Health of Battered Women. Journal of Midwifery and Reproductive Health. 2015; 3(2), 349-354.

18. Shakerian, A. The role of personality trait dimensions and gender on predicting marital adjustment. Journal of Kermanshah University of Medical Sciences (J Kermanshah Univ Med Sci). 2012; 16(1), 16-22.

19. Goldberg DP, Gater R, Sartorius N, Ustun TB, Piccinelli M, Gureje O, et al. The validity of two versions of the GHQ in the WHO study of mental illness in general health care. Psychol Med. 1997;27:191-197.

20.Noorbala AA, Bagheri Yazdi SA, Yasami MT, Mohammad K. Mental health survey of the adult population in Iran. Br J Psychiatry. 2004;184:70-73.

21.Costa P. T., and McCare R. R. Cross-sectional studies of personality in a national sample: I Development and validation of survey measures. Psychology and Aging. 1986; 1: 140- 143.

22. Maleki, Z., Ashkan, S., Ashoori, J., & Yosefi, N. [Relationship between Personality Traits, Religiousity and Happiness with General Health among Nursing Students (Persian)]. Iran Journal of Nursing. 2014; 26(86), 90-100.

23. Jafarnejad P., Vali Elah F., Moradi A.R., Shokri O.[A Study Of the Relationship Between the Big Five Factors Of Personality, Coping Styles and Mental Health in Undergraduate Students (Persian)]. Journal of Psycholigy and Education. 2005; 35(1), 51-74

24. Furnham, A., & Cheng, H. Personality and happiness. Psychological Reports. 1997; 80(3), 761-762

25. Moghanloo, M., & Aguilar-Vafaie, M. Domain and facets of the five factor model of personality correlates of happiness, mental health and physical health. Iranian Journal of Psychiatry and Clinical Psychology. 2009; 15(3), 290-299.

26. Nikrahan, G., Ganjeh, S. J., Zarean, E., & Naghshineh, E. Examining the relationship between big five personality factors, coping styles and depression in pregnant women. 2012.

27. Steiner, H., Erickson, S. J., Hernandez, N. L., & Pavelski, R. Coping styles as correlates of health in high school students. Journal of adolescent health. 2002; 30(5), 326-335.

28. Goldbeck, L., Baving, A., & Kohne, E. [Psychosocial aspects of beta-thalassemia: distress, coping and adherence]. Klinische Padiatrie. 1999; 212(5), 254-259.

29. Messina, G., Colombo, E., Cassinerio, E., Ferri, F., Curti, R., Altamura, C., &

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Cappellini, M. D. Psychosocial aspects andpsychiatric disorders in young adult with thalassemia major. Internal and emergency medicine. 2008; 3(4), 339-343. 30.Costa, P. T., & McCrae, R. R. Hypochondriasis, neuroticism, and aging: When are somatic complaints unfounded? American Psychologist. 1985; 40(1), 19-28. doi: 10.1037/0003-066X.40.1.19

31)Heydari Pour, M., Mashhadi, A., & Asghari-Nekah, S. M. [Relationship betweenCharacteristics, Emotional Intelligence and Quality of Life Mental Health of People with Disabilities (Persian)] . Quarterly Journal of Rehabilitation. 2013; 14(1), 40-49.

32.Dupuis, S. L., & Smale, B. J. An examination of relationship between psychological well-beingand depression and leisure activity participation among older adults. Loisir et société/Society and Leisure. 1995; 18(1), 67-92.

33. Mednick, L., Yu, S., Trachtenberg, F., Xu, Y., Kleinert, D. A., Giardina, P. J., Porter, J. B. Symptoms of depression and anxiety in patients with thalassemia: prevalence and correlates in the thalassemia longitudinal cohort. American journal of hematology. 2010; 85(10), 802-
805.

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