Original Article

Zahedan Journal of Research in Medical Sciences

Journal homepage: www.zjrms.ir

Relationship between Personality Traits and Happiness in Patients with Thalassemia

Babollah Bakhshipour,*[1] Samaneh Panahiyan,[2] Ramezan Hasanzadeh,[2] Ahmad Tamaddoni[3]

1. Department of Psychology, Payam-e-Noor University, Tehran, Iran
2. Department of Psychology, Sari Branch, Islamic Azad University, Sari, Iran
3. Department of Pediatrics, Babol University of Medical Sciences, Babol, Iran

Article information

Article history:
Received: 8 Apr 2012
Accepted: 24 June 2012
Available online: 30 Oct 2013
ZJRMS 2014 Nov; 16(11): 28-32

Keywords:
Personality
Happiness
Thalassemia

*Corresponding author at:
Department of Psychology,
Payam-e-Noor University,
Tehran, Iran.
E-mail:
ba_bakhshipour@yahoo.com

Abstract

***Background*:** The aim of this study was determining the relationship between personality traits and happiness in patients with major thalassemia.

***Materials and Methods*:** The design of this study was descriptive (correlational study). The target population of this study was all under-treated patients with major thalassemia in Amirkola thalassemia center in 2011. Among these patients, 150 patients were sampled using simple random sampling method and Morgan's table. The data were analyzed by means of calculating Pearson correlation coefficients and multiple linear regression analysis. The patients were asked to complete NEO-five factor Inventory (short form) and Oxford happiness inventory.

***Results*:** Based on the results, the coefficient of regression analysis of NEO personality factors (big five) and happiness was 0.45, which shows a linear relationship between personality factors of NEO and happiness in patients with thalassemia. Thus, there is a statistically significant relationship among personality traits (neuroticism, extroversion, openness, agreeableness, conscientiousness) and happiness.

***Conclusion*:** Among personality traits, extroversion, flexibility, agreeableness and conscientiousness had positive statistically meaningful relationship with happiness i.e. patients with lower scores in neuroticism, were happier.

Introduction

During past decade, psychologists have increasingly been attracted to the notion of happiness, its definitions, its predictive factors and determinants and the relationship between happiness and personality. There are some fundamental questions regarding the notion: could happiness be considered as a state resulting of people's situations and their life event? Does it have anything to do with personality? Or happiness is the result of a balance between these two factors? The prominent approach in studying happiness considers it as a personality characteristic [1, 2]. Results of a lot of research acknowledged that happiness is the same as the construct called stable extroversion in Eyesenck theory and extroversion could be considered as the most robust predictive of happiness (especially in predicting social happiness). Some studies showed that the quality of satisfaction from the whole life span could determine the level of happiness i.e. people that are more satisfied with their life, are happier. Consequently, lower level of happiness is caused by some events that reduce the level of satisfaction. It is worth to note that these are not the facts themselves which resulting in increased or decreased satisfaction level. Rather, peoples' judgments and perceptions are the determinant factors. Therefore, avoiding negative judgments is the key factor of living a happy life. The results of cross-cultural study showed that happiness could be considered as a different and distinct construct in terms of people's culture, environmental situation and social context [2]. This differentiation is stable and the stability suggests the relationship between happiness and personality factors rather than life events.

As a result, happiness is a personality variable and it has biological foundation, based on Eyesenck theory. Most of the studies aiming to determine the external and internal factors affecting happiness suggest that first of all, the external factors do not play important roles in happiness and their effects on happiness are not persistent. Moreover, happiness is linked to some personality factors such as extroversion, neuroticism and psychoticism. So that extroversion is positively correlated to happiness but neuroticism and psychoticism are negatively correlated to it [3].

Lyubomirsky et al. came up with an eclectic model of genetics and personality for determining well-being and happiness. They believe that well-being and autonomic happiness are the same as environmental and genetic factors [4]. It seems that individual differences on happiness could partly be explained by personality differences which could be as the results of genetic factors. In other words, happiness is a personality variable with biological foundation [5].

Various studies showed that personality factors (neuroticism, extroversion, openness, agreeableness and conscientiousness) have considerable influences on

happiness. According to some experts, two out of five personality factors have significant relationship with happiness. Denver and Cooper and Argyle et al. respectively reported correlation coefficients 0.22 and 0.45 between extroversion and happiness [6, 7].

Costa and Mc Care showed that happiness associates with higher level of extroversion and lower level of neuroticism. Neuroticism has a negative correlation with positive affect and happiness [8]. However, neuroticism correlates positively with depression [9].

Thalassemia is a common form of inherited autosomal recessive blood disorder that is caused by the weakening and destruction of red blood cells. Thalassemia is caused by variant or missing genes that affect how the body makes hemoglobin. Therefore, patients who are suffering from thalassemia need properly professional treatment in order to live a normal life. In recent years, life expectancy index and the quality of life have been increased in patients with thalassemia due to considerable medical progress and efficient treatments. As a result, people with thalassemia live their lives in the society such as non-patients. People with thalassemia mostly have been subjected in medical rather than psychological studies and there are a few psychological studies regarding thalassemia [10].

Since last years of the twentieth century, there has been a growing attraction to the subject of positive emotions in psychology [11, 12]. There has been increasing number of studies with the subject of happiness since 1960 [12]. Ryff and Singer defined happiness as an attempt to perfection that shows the real potentials of the person [13]. A happy person is light-hearted, healthy, open-minded, extrovert, optimist, non-worrier, religious, with high self-esteem, faithful to ethics, humble and intelligent [14]. Happiness include different aspects of life such as life satisfaction, absence of negative emotions such as depression and anxiety, healthy inter-personal relationships, personal growth and loving nature and other people. As a result of their personality, some people are happier than others because personality is a key factor in predicting happiness. Personality is basically an important factor in determining humans' behavior [15]. Therefore, the aim of the present study is to determine the relationship among personality factors and happiness in people with thalassemia (major).

Materials and Methods

The current study is descriptive (correlation study). The target population consisted of 700 under-treated patients with major thalassemia in Amirkola thalassemia center in 2011, among which 248 patients were sampled using Morgan's table. However, due to some limitations (under-aging, under-graduating to fill the questionnaires and rarely attending the center because of oral dosage form) 150 patients were sampled using simple random sampling method. The gathered data were analyzed by means of Pearson correlation coefficient and linear multiple regression analysis.

Instruments: a) EO-Five Factor Inventory: is one of the recent, well-known personality inventories that was constructed using factor analysis method by McCare and Costa [16]. The content of the inventory includes five major factors: neuroticism (N), extroversion (E), openness (O), agreeableness (A) and conscientiousness (C). The items, that are categorizes as closed-ended questions, are scored in a five point Likert type. The reliability and validity of the inventory are appropriate. Coefficient of Chronbach's alpha was reported 0.74 by a study on 40 experts of agriculture ministry. The reliability of the subtests were reported N=0.85, E=0.70, O=0.68, A=0.54 and C=0.82. Costa and McCare [17] showed that the correlations among 5 subtests of short and long version of the inventory ranged from 0.77 to 0.92. Furthermore, the internal consistency of the subtests estimated from 0.68 to 0.86.

b) Oxford Happiness Inventory: is theoretically based on Argyle and Crossland's definition of the construct [18]. Argyle et al. [19] pointed out that the inventory is the counterpart of Beck Depression Inventory (BDI). The last revised form of Oxford Happiness Inventory consists of 29 items scored in four-optional form and the participants are asked to self-evaluate their happy/unhappy emotions Francis et al. [20]. Eleven out of 29 items are extracted from BDI, then their contents were reversed and finally 11 items were added to the inventory in order to measure other aspects of mental health. These items include positive mood, efficacy, life satisfaction, self-esteem, mental health and happiness. Oxford Happiness Inventory reduces the bias of responding based on context or desirability. Indeed the inventory is useful for both general and clinical populations. Chronbach's alpha and test-retest reliability coefficient of the inventory were reported 0.90 and 0.78 respectively. Concurrent criterion validity of the inventory was calculated 0.43, using friends' evaluations as the criterion. As far as happiness is conceptualized as a construct consists of 3 different dimensions (positive effect, satisfaction and absence of negative affect), the correlation coefficient of the inventory with BDI was calculated 0.52 [20].

Francis et al. [20] conducted a cross-cultural study to examine psychometric properties such as reliability and validity of Oxford Happiness Inventory. According to them, Chronbach's Alpha of the inventory ranged from 0.89 to 0.9 in British, American, Australian and Canadian university students. Reliability of the inventory was studied in Iran. With 110 Allame-Tabatabaee and Shahed University students as participants, Chronbach's Alpha, Split-Halves and test-retest (with 3 weeks interval) coefficients were reported 0.89, 0.92 and 0.79 respectively. Demographic Questionnaire: was designed to gather demographic data such as age, gender and educational status.

Results

As stated above, the design of the study is correlational research that is created to determine the relationships

within variables so Pearson coefficients were calculated. The results are presented in below Table .

1. Descriptive statistics of demographic properties: The sample consisted of 150 patients, 61 of them were males and 88 were females (40.9 and 59.1% respectively). In terms of age grouping, 35 patients were younger than 20, 34 patients were 20-25 and 81 patients were older than 25 years old (23.3, 22.7 and 54 % respectively). In terms of educational status, 11 patients were at elementary school level, 32 patients at middle school level and 31 patients at high school level (7.3, 21.3 and 20.7% respectively). In addition, 36 patients had diploma, 26 patients had associated degree and 14 patients had bachelor's degree (24, 17.3 and 9.3 % respectively).

2. Descriptive statistics of variables: According to the gathered data via NEO-Five Factor Inventory and Oxford Happiness Inventory, the descriptive statistics were calculated and presented in the below table. Given the five personality factors, extroversion and openness scored the highest (11.03) and lowest (9.10) means respectively. Also calculated mean of happiness was 35 with 12.815 standard deviation and the median was 34.5 indicating that half of the sample were scored lower than 34.5 and the other half were scored above 34.5. Testing hypotheses is presented below.

3. Hypotheses testing: As stated in the methodology, multiple regression analysis was used to examine the relationship between NEO Big Five (as independent variable) and happiness (as dependent variable). Five hypotheses were formulated and tested below.

1-2: One to one hypothesis testing of the relationship between Neo Big Five personality factors and happiness-testing the linear regression model, correlation coefficients (R) and coefficients of determination (R Square; to determine the explained variance of the dependent variable by five independent variables) were calculated via SPSS-16.

All standard coefficients of regression (Betas) are statistically meaningful, given that $p \leq 0.05$ allows the rejection of null hypothesis. In conclusion, with five models, all five independent variables (neuroticism, extroversion, openness, agreeableness and conscientiousness) have statistically meaningful relationship with dependent variable (happiness) in people with major thalassemia. The results of Durbin-Watson test admit that the observations were independent (indices ranged from 1.5 to 2.5).

Calculated correlational coefficients among personality factors (neuroticism, extroversion, openness, agree ableness and conscientiousness) and happiness are -0.15, 0.28, 0.33, 0.19 and 0.21 respectively. According to the coefficients, there is a statistically meaningful negative correlation between neuroticism and happiness. On the other hand, the relationships among, extroversion, openness, agreeableness and conscientiousness and happiness are positive and statistically meaningful. Finally, linear multiple regression was administered to determine the best predictive variable. Using Enter method, a statistically meaningful model was resulted ($F=7.5$, $p=0.0001$). The model explained 18% variance (Adjusted coefficient of determination= 0.18). The results are presented in the table 3.

Table 1. Descriptive statistics of the research variables

Variable	Frequency	Minimum	Maximum	Mean±SD
Neuroticism	150	2	17	9.52±3.537
Extroversion	150	4	16	11.03±2.587
Openness	150	4	16	9.10±3.076
Agreeableness	150	5	16	11.01±2.701
Conscientiousness	150	3	16	10.59±3.338
Happiness	150	7	59	35±12.815

Table 2. Raw and standardized coefficients of regression equation, correlations, coefficients of determination and Durbin-Watson test results

Model	Independent variables	B	Beta	*t*	*p*-Value	F	R	*p*-Value	R2	Durbin Watson
1	Constant	29.60	-0.16	9.88	0.0001	3.819	0.16	0.05	0.06	1.757
	Neuroticism	0.75		1.95	0.05					
2	Constant	19.44	-0.28	4.39	0.0001	13.03	0.28	0.0001	0.08	1.874
	Extroversion	0.40		2.66	0.0001					
3	Constant	22.29	-0.33	7.19	0.0001	18.72	0.33	0.0001	0.11	1.846
	Openness	1.39		4.32	0.0001					
4	Constant	24.93	-0.19	5.75	0.0001	5.710	0.19	0.01	0./03	1.852
	Agreeableness	0.91		2.389	0.01					
5	Constant	26.38	-0.30	7.710	0.0001	6.691	0.21	0.009	0.04	1.726
	Conscientiousness	0.81		2.638	0.009					

Table 3. Estimated regression coefficients

	β	$SE_β$	β standard	*t*	*p*-Value
Neuroticism	0.436	0.277	0.106	1.572	0.11
Extroversion	1.011	0.406	0.202	1.493	0.01
Openness	1.156	0.32	0.277	3.607	0.0001
Agreeableness	0.613	0.367	0.130	1.672	0.09
Conscientiousness	0.313	0.306	0.082	1.022	0.30

The results indicate that 2 (extroversion and openness) out of 5 personality factors could be considered as predictive determinants. Therefore neuroticism, agreeableness and conscientiousness are omitted from the regression equation. Increasing one scale in extroversion and openness corresponds with 20% and 27% increased happiness in return. The result emphasizes on the important role of the two factors in predicting happiness.

Discussion

The study was aimed to examine the relationship among personality factors and happiness in people with thalassemia (major). The results admitted that there are correlational relationships among predictive variables and criterion. A statistically meaningful negative correlation was found between neuroticism and happiness.

The result is consistent with past research [8, 21-27]. As the results show, increased neuroticism corresponds with decreased happiness. Adopting positive attitude prevents tension and anxiety. Consequently, people with high level of happiness tend to experience positive emotions and judge the events in an optimistic way. However, unhappy people do negative evaluations under unpleasant environment and more frequently experience negative emotions such as anxiety, depression an anger. One explanation could be the fact that there is a negative relationship between depression and happiness so that depression and anxiety are some traits of neuroticism. On the other hand, happy people avoid negative emotions (such as depression) and seek for positive intimate relationships with others.

Indeed, a meaningful correlation between extroversion and happiness was found. The result is consistent with past research [2, 6, 20, 22-24, 28-30]. Different studies admitted that most of the happy people are extrovert and capable of developing strong bonding. Happy people feel happiness with or without other people, comparing with unhappy people. Capability of establishing positive relationships is an important aspect of mental health. According to Martin study [31], extroverts are usually witty and are benefited from some abilities attributed to emotions like emotional intelligence and proper social interaction. Chan and Joseph [32] acknowledged that firstly, extroversion is correlated to happiness, self-actualization and self-esteem. Secondly, there is a positive relationship between socialization and happiness but the correlation between happiness and neuroticism is negative. In conclusion, there is a positive relationship between happiness and well-being, a negative relationship between neuroticism and well-being and negative correlation between psychoticism, conscientiousness and compatibility.

The hypothesis on relationship between openness and happiness in people with thalassemia was confirmed. The result is supported by Abedi et al. [33]. Openness to new experience is one of the dimensions of mental health. People with great flexibility are curious about their internal and external world. Consequently, their life is filled with new experience. They tend to accept novel attitudes and unaccustomed values therefore they experience more emotions (positive and negative) deeper than inflexible people.

A meaningful relationship between agreeableness and happiness was found that is consistent with studies made by Garousi et al. and McCrae and Costa [26, 34]. Agreeableness has a strong environmental component, compared with other personality factors. It facilitates positive experience in social situations and results in success that increases happiness in return. Researchers believe that people who adopt negative attitudes towards their abilities and hold false believes, might not explore meaning behind the events and are vulnerable to physical-mental disease so they might be less happy with their lives.

Conscientiousness had a significant correlation with happiness. The result is supported by McCrae and Costa [34], Hayes and Joseph [24], Garousi et al. [26] and Abedi et al. [33]. Conscientiousness is defined as the ability to control impulses in a socially acceptable way. Therefore, it facilitates task-based and goal-oriented behaviors. Conscientiousness involves thinking before acting, postponing urges, obeying norms and social codes and organizing and prioritizing tasks. One explanation is that thalassemia that is an incurable chronic physical condition, acts as a critical situation for both patients and their families.

The patients need to learn the suitable coping skills because if the critical condition continues, it might result in worsening the physical condition and prevents suitable treatment. Thus frustrating situation caused by the disease might make the patients vulnerable to mental problems and disorders. Also it makes the patients helpless and desperate that in return leads to reduced happiness, self-confidence and hope. Since the patients with thalassemia demonstrate limited physical proficiency in their normal life, it makes them anxious, angry and depressed so they face mental crisis and stress. It might result in vulnerability to mental problems. One of the limitations of the current study was available sampling method that confines the generalize ability of the findings. Furthermore, since the design of the study was correlational, casual explanation is not allowed.

Acknowledgements

This paper was based on a desertion for Master Degree.

Authors' Contributions

All authors had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest

The authors declare no conflict of interest.

Funding/Support

This paper had been done by personal expenses.

References

1. Argyle. M., Luo L. The happiness of extroverts. Pers Individ Dif. 1990;11(1):10100–1017.
2. Brebner J, Martin M. Testing for stress and happiness: The role of personality factors. In: Spielberger CD, Sarason IG, editors. Stress and emotion: Anxiety, anger and curiosity. 1st ed. New York: Taylor and Francis; 1996. pp. 139–72.
3. Diener E, Lucas R. Subjective emotional well-being. In: Lewis M, Haviland-Jones JM, Feldman-Barrett L, editors. Handbook of emotions. 3rd ed. New York: Guilford Press; 2010..
4. Lyubomirsky S, Sheldon KM, Schkade D. Pursuing happiness: The architecture of sustainable change. Rev Gen Psychol. 2005;9(2):111–31.
5. Mirzai F, Hatami HR. Study of the relationship of personality characteristics and happiness in university students. J Thought Behav. 2010;5(17):47–56.
6. Denver K, Cooper H. The happy personality: A meta analysis of 137 personality trait subjective-being. Psychological. 1998;124(1):229–97.
7. Argyle M, Martin M, Luo L. Testing for stress and happiness the role of social and cognitive factors. In: Spielberger CD, editor. Stress and emotion. Washington DC: Taylor and Francis; 1995. pp. 173–87.
8. Costa PT, McCrae RR. Stress, smoking motives, and psychological well-being: The illusory benefits of smoking. Adv Behav Res Ther. 1981;3(4):125–50.
9. Cheng H., Furnham A. Personality, selfesteem and demographic predictions of happiness and depression. Pers Individ Dif. 2003;34(6):113–7.
10. Research and educational institute of youths for thalassemia. Thalassemia National Conference: Opportunities and challenges. Tehran: Publication of developing sciences; 2009.
11. Veenhoven R. Is happiness a trait? Tests of theory that a better society does not make. Soc Indicat Res. 1994;32:101–60.
12. Argyle M. The Psychology of happiness. 2nd ed. New York: Routledge; 2001. p. 274.
13. Ryff C, Singer D. Happiness is everything, or is it? Explorations on the meaning of psychological well-being. J Pers Soc psycho. 1989;57(6):1069–81.
14. Diener E. Subjective well-being. The science of happiness and a personal for a national index. Am Psychol. 2000;55(1):34–43..
15. Padyab A. [Study of the relationship between intelligence and personality in adolescents (age 13-14) in Yasouj] . Tehran: Tarbiat Modares University; 1997.
16. McCrae RR, Costa PT Jr . Openness to experience . In: Hogan R, Jones WH, editors. Perspectives in personality. Greenwich: JAI Press; 1985. pp. 145–72.
17. Costa PT, McCare RR. Odessa FL: Psychologcal Assessment Resources, editor. Revised NEO personality inventory (NEO-PI-R) and NEO fine factor inventory (NEO-FFI). 1992
18. Argyle M, Crossland J. Dimensions of positive emotions. Br J Soc Psychol. 1987;26(2):127–37.
19. Argyle M, Martin M, Crossland J. Happiness as a function of personality and social encounters. In: Forgas JP, Innes JM, editors. Recent advances in social psychology: An international perspective. Amsterdam: Elsevier; 1989. pp. 189–203.
20. Francis L, Brown I, Blester D, Philpchalk R. Happiness as stable extroversion. Pers Individ Dif. 1989;24(2):167–71.
21. Brebner J. Happiness and personality. Pers Individ Dif. 1998;25(2):279–96.
22. Hills P, Argyle M. Happiness, introversion-extraversion and happy introvert. Pers Individ Dif. 2001;30:595–608.
23. Lu L, Shih B. Personality and happiness: Is mental health a mediator? Pers Individ Dif. 1997;22(2):249–56.
24. Hayes N, Joseph S. Big 5 correlates of measures of subjective well-being. Pers Individ Dif. 2003;33(8):1325–42.
25. AliPour A. Relationship between happy life and personality. J Psychol Sci. 2005;4(14):24–36.
26. Garousi Farshi M, Mani A, Bakhshipour A. [Study of the relationship between personality factors and happiness in university students of Tabriz]Persian. J Psychol Tabriz Univ. 2006;1(1):121–36.
27. Chioqueta AP, Stiles TC. Personality traits and the development of depression, hopelessness, and suicide ideation. Pers Individ Dif. 2005;38(6):1283–91.
28. Costa PT, McCrae RR. Personality disorders and the Five-Factor Model of personality. J Pers Disord. 1990;4:362–71.
29. Argyle M. The psychology of interpersonal behaviour. 4th ed. London: Penguin Books; 1994.
30. Khanzade H, Moltafet G, SanfiKhani L, Sadati S. study of the relationship between personality dimensions and happy life in university student. J Psychol Sci. 2006;5(20):20.
31. Martin RA. Sense of humor and physical health: Theoretical issues, recent findings, and future directions. Humor. 17:1–19.
32. Chan R, Joseph S. Dimensions' personality, domains of aspiration subjective well-being. Pers Individ Dif. 2003;28(2):347–54.
33. Abedi MR, Mirshah SE, Liyaghatdar MJ. Reliability, validity, and normalization of the oxford happiness inventory in Isfahan university students. J Psychiatr Iran Clin Psychol. 2006;1(2):95–100.
34. McCrae RR, Costa PT. Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. J Personal Soc Psychol. 1980;38:668–78.

***Please cite this article as*:** Bakhshipour B, Panahiyan S, Hasanzadeh R, Tamaddoni A. Relationship between personality traits and happiness in patients with thalassemia. Zahedan J Res Med Sci. 2014; 16(11): 28-32.