



Comparison of Self-Concept and Death Anxiety between Women with Type 2 Diabetes and Healthy Women

Ghoncheh Rahrovi¹, Shahnaz Nouhi^{1*}, Hossein Khastar²

¹Dept. of Psychology, Shahroud Branch, Islamic Azad University, Shahroud, Iran.

²Dept. of Physiology, School of Medicine, Shahroud University of Medical Sciences, Shahroud, Iran.

Received: 4 August 2017

Accepted: 11 October 2017

Abstract

Background: Chronic disorders are those that entangle the patient for a long time and affect the person's ability for normal operation. What is important in the treatment of a chronic disease such as diabetes, in addition to controlling the disease, is improving patient's personal and psychic performances. The effect of diabetes and its complications on self-concept and anxiety of death are still unknown and studies in this field are insufficient. This study aimed to compare self-concept and death anxiety in type 2 diabetic and healthy women.

Methods: The present study is a causal-comparative study. In this study from all diabetic women who were admitted to gynecology, dialysis and outpatients of Shahid Chamran Hospital, Tehran, Iran, and healthy women 30 to 60 years. 200 cases were selected using non-random purposive sampling in 2016. From this sample, 100 women with type 2 diabetes and 100 healthy women were selected based on entering standards. The questionnaire used in this study included Rogers Self-concept Inventory (1975) and Templer Death Anxiety Inventory (1970). Data was analyzed using descriptive statistics and inferential statistics methods (independent t-test and Chi-square test) using SPSS version 18.

Results: The results showed that Rogers self-concept (B form) among women with type 2 diabetes (113.98 ± 16.64) was significantly lower than among non-diabetic women (123.65 ± 13.07) ($P=0.003 < 0.05$), Rogers self-concept (A form) did not have significant difference among diabetic (111.59 ± 18.40) and non-diabetic women (114.24 ± 13.17) ($P=0.776 > 0.05$), and death anxiety among women with type 2 diabetes (44.41 ± 8.44) was significantly higher than among non-diabetic women (21.05 ± 3.22) ($P=0.005 < 0.05$).

Conclusions: Self-concept and anxiety of death may be considered as causes or risk factors or resonators in type 2 diabetes.

Keywords: Self-concept, Death anxiety, Type 2 diabetes, Women, Tehran.

*Corresponding to: S Nouhi, Email: psynut.sh@gmail.com

Please cite this paper as: Rahrovi G, Nouhi S, Khastar H. Comparison of self-concept and death anxiety between women with type 2 diabetes and healthy women. Int J Health Stud 2017;3(4):11-15.

makes of 90–95% of diabetes cases, the body resists against action of insulin. Type 2 diabetes is more frequently seen in obese individuals.^{1,4} One type of anxiety is death and approximately two-thirds of all deaths cross the globe are a result of chronic diseases.⁷ Also, an increase in prevalence of chronic diseases accompanied by an increase in hope for life among people could culminate in longer life span.⁸ Diabetes is a chronic disease which occurs with increasing age as well as obesity, and decreases with physical activity, is the third leading cause of death in the world.⁹ The global prevalence of diabetes among adults over 18 years of age rose from 4.7% in 1980 to 8.5% in 2014, and almost half of all deaths attributable to high blood glucose occur before the age of 70 years.¹⁰ In Iran, the prevalence of diabetes mellitus was predicted to reach 8.43% in 2013 and there were 38,002 diabetes-related deaths.¹¹

Similar to other chronically disabling diseases, people who have diabetes also face difficulties that affect all aspects of their everyday life. These patients not only suffer from physical difficulties, but also psychological ones.¹² Evidence suggests that wide range of interventions are needed to improve diabetes. Also, several studies show that these patients struggle with their mental health.¹³ Some effective factors in health psychology are self-concept and sentimental value.¹⁴ Self-esteem, similar to self-image and self-concept, together with a series of peripheral values constitute a complex.⁸ Self-concept is one of the fundamental concepts of social psychology and it deeply affects a patient's viewpoint toward health, communication with others, hope for life and adaptation capabilities.¹⁵ Self-concept is not apparent at the birth, but it is learned or evolves during actions and mutual behavior with oneself, others and the environment.¹¹

With respect to the importance of aforementioned concept in taking healthcare to the patient, death anxiety is considered as a nursing diagnosis in North American Nursing Diagnosis Association criteria.¹⁶ Death anxiety is closely related with age, character attributes, cultural and social factors, growth trend, religious beliefs and patient's presence.¹⁷ Level of death anxiety among individuals depends on how they are affected by a chronic disease with an unknown augury, and is related to lack of enough recovery during treatment, treatment period and thoughts of death and life.⁸ Dogan et al. (2015) showed that there is a positive correlation between depression and death anxiety among individuals hospitalized with diabetes.¹⁸ Therefore, considering the importance of the effect of psychological variables (self-concept) and death anxiety, studying and evaluating these variables would be efficient for

Introduction

Diabetes disease affects an individual's interpersonal and cultural performance.¹ Diabetes is a collection of chronic diseases that need continuous medical care in order to reduce the danger of patient's blood sugar getting out of control.^{2,3} Types 1 and 2 diabetes are considered as two separate diseases. Types 1 and 2 diabetes are common in youth and with overweight, respectively.^{1,4} Type 1 diabetes, or diabetes due to immunity reaction, makes 5–10% of diabetes patients.⁵ Incidence of type 1 diabetes can be confirmed by investigating family history of this disease and paying attention to afflicted family members' age and sexuality.⁶ In type 2 diabetes, which

helping to reduce psychological problems and death anxiety.¹⁹ The present study aims to draw a comparison between self-concept and death anxiety among healthy women and women with types 1 and 2 diabetes.

Materials and Methods

The present study was a causal-comparative study. The population included all diabetic women that were admitted to gynecology and dialysis units and outpatients of Shahid Chamran Hospital, Tehran, Iran, and healthy women aged 30–60 years, in 2016. Two hundred cases were selected among them by using non-random purposive sampling from the second half of May until the second half of June 2016. From this sample, 100 women with type 2 diabetes and 100 healthy women were selected, based on selection criteria. Persons who did not meet the selection criteria or whose data were outlying were excluded from the study.

Selection criteria included: having personal satisfaction and filling out the form, giving written informed consent, aged between 30 and 60 years and with a minimum ability to read and write in order to complete the questionnaires. The control group (healthy subjects) was also selected from patients' relatives or those with no history of type 2 diabetes and other serious psychiatric or physical illnesses, and had good mental and physical health at the time of sampling. Selection criteria for patients included: a definitive diagnosis of diabetes by a physician, 30 years of age, and consent to participate in research; exclusion criteria were having psychiatric disorders, being under psychiatric treatment, and having impaired psychological functions. Data collection method was individual interviews, and a structured questionnaire was completed by subjects and for persons who had difficulty in completing the questionnaires, a researcher completed it in face-to-face interviews.

Data were collected by using questionnaires that consist of three parts. The first part was demographic information such as age, gender, marital status, education level, place of residence, occupation and income; the second part was related to self-concept. This questionnaire was prepared by Rogers (1980) and is used to determine positive and negative self-concept. The time required for this test was 20 minutes; self-concept was measured using a 7-point scale between two personality traits. In this part subjects chose a number from 1 to 7 among two traits. The questionnaire consisted of two forms, A and B, that each had 25 personality characteristics. In form A, the subjects were asked to mark a number they preferred by considering scales on the questionnaire (that is, they chose the characteristics numbered 1 to 7 that was closest or furthest from them). In form B, subjects were asked to mark their ideal personal traits, based on the questionnaire traits. Finally, when the scores of both forms were calculated, a score between 0 and 7 showed that the subject had normal self-concept, and if higher than 7 they were considered to have poor and negative self-concept. In other words, high self-concept scores meant mismatch between the actual self and the ideal self.²⁰ For scientific validity of the data collecting tools, the questionnaire was assessed by 10 faculty members who commented on it; to determine reliability Cronbach's alpha and split-half were used

and their coefficients were obtained which were 0.81 and 0.84 respectively; and to determine the clarity of the questions, the questionnaire was given to 15 women who reviewed the items for intelligibility and clarity, and the necessary reforms were carried out.

In the third part, the Templer death anxiety questionnaire was used. This questionnaire consisted of 15 yes/no questions and depending on a yes or no answer, the response was given a score of 1 or 0 (score 1 if the response represents the presence of death anxiety and zero if the response indicates no anxiety of death). For example, in question: Do you worry about death? Response "no" shows no sign of anxiety in the individual and that gets the points 0 and response "yes" shows the existence of death anxiety and earned a score of 1. The rating scale was considered from 0 (absence of death anxiety) to 15 (very high death anxiety) to the middle (6,7) cut-off point. A score of between 7 and 15 meant high death anxiety, and 6 or less was considered as low death anxiety. The Templer Death Anxiety Scale is a standard questionnaire that is used in various researches worldwide to measure death anxiety; it was translated, and factor analysis and was validated in Iran.²¹ To indicate the scientific validity of data collecting tools, 10 faculty members assessed the questionnaire and made comments; to determine reliability Cronbach's alpha and split-half were used and their coefficients were obtained respectively 0.77 and 0.79; and to determine the clarity of the questions, the questionnaire was given to 15 women who assessed it for intelligibility and clarity of the items, reviewed each questions and the necessary reforms were carried out.

To compare demographic variables such as educational status, age and marital status the Chi-square test was used, and to compare mean scores of self-concept and anxiety of death t-test was used. SPSS version 18 was used for statistical analysis and Level of significance was 0.05.

Results

Table 1 shows the relation between diabetes' descriptive characteristics and demographic variables. More subjects were younger than 39 years (N=84, 42%): the diabetic group had (N=44, 44%) subjects, and non-diabetic subjects were (N=40, 40%). More subjects had undergraduate degrees (79 patients, 39.5%): 40 (40%) in the diabetic group and 39 (39%) were in the non-diabetic group. Most subjects (117 cases, 58.5%) were single: 55 (55%) in the diabetic group and 62 (62%) in the non-diabetic group.

Based on the results of Chi-square test in Table 1, there were no significant differences between the diabetic and non-diabetic groups in terms of age, education and marital status ($P > 0.05$).

Table 2 shows the mean and standard deviation values for self-concept (a) in the diabetic group were 111.59 and 18.4 and in the healthy group 114.24 and 13.17, respectively; for self-concept (b) in the diabetic group were 113.98 and 16.64, respectively and in the healthy group 123.65 and 13.07, respectively; for Death anxiety variable in the diabetic group were 44.41 and 8.44 Respectively, and in the healthy group 21.05 and 3.22, respectively.

Table 1. Descriptive characteristics, marital status, and health-testable of the research

Variable	Number (%)	Diabetes		Chi-Square	P.V
		Yes N=100	No N=100		
		Number (%)	Number (%)		
Age (year)	39≥	41(41)	43(43)	1.85	0.76
	40–49	24(24)	26(26)		
	50–59	24(24)	21(21)		
	60≤	10(10)	7(7)		
	Not respond	1(1)	3(3)		
Education	Diploma or less	30(30)	25(25)	6.143	0.19
	Associate degree	21(21)	16(16)		
	Bachelor	40(40)	39(39)		
	Master's degree or higher	9(9)	18(18)		
	Not respond	0(0)	2(2)		
Marital status	Single	42(42)	38(38)	3.62	0.16
	Married	55(55)	62(62)		
	Divorced	3(3)	0(0)		

Table 2 shows insignificant difference in Self-concept (a) between diabetic and healthy groups. The obtained t-value of 1.074 is less than the table value of 2.01 ($P=0.776>0.05$); and that there was significant difference in Self-concept (b) between the diabetic and healthy groups. The obtained t-value of 8.77 is more than the table value of 2.01 ($P=0.003<0.05$). Table 2 also shows that there is significant difference in Death anxiety between the diabetic and healthy groups: the obtained t-value of 8.24 is more than the table value of 2.01 ($P=0.005<0.05$).

Table 2. A comparison between the average of self-concept and death anxiety scores of the diabetic and healthy groups

Variable	Diabetes		t	P.V
	Yes (N=100)	No (N=100)		
	SD±mean	SD±mean		
Self-concept (a)	111.59±18.40	114.24±13.17	1.07	0.78
Self-concept (b)	113.98±16.64	123.65±13.07	8.77	0.003
Death anxiety	44.41±8.44	21.05±3.22	8.24	0.005

Statistical test t Two independent samples.

Discussion

Chronic diseases such as obesity,²² Thalassemia major²³ and cancer²⁴ can affect the person's self-concept,²⁵ and also are related to the death anxiety levels of individuals depending on their affliction to a chronic disease or whether the prognosis of their disease is unknown. Studies show that there is a direct relation between self-concept and the quality of life of patients with type 2 diabetes.²⁶ Therefore, it is possible to prevent physical and mental complications resulting from a chronic disease by modifying and enhancing the quality of living, which increases the self-concept level of individuals. Using a descriptive investigation on self-concept, control place and defense mechanism of diabetic patients and healthy people in Ardebil city in 2009, the significant difference between two groups of patients and healthy individuals with respect to mental variables were investigated.⁸ In addition, there are similar studies to the present study such as Raezani, Ghaem Maghami et al.²⁷; Hoog, Galbrig and White;²⁸ Jenny Van Son, Nicklik, Pop et al.²⁹. The self-concept of diabetic women on self-concept scale of form B shows, to some extent, that these

diabetic women were not satisfied with their status and that they were inclined to improve their behavioral and mental characteristics.

According to theoretical findings of the research and to theoretical assumptions, it has been determined that the patients with difficult disease like diabetic individuals have experienced higher degree of death anxiety than others. A study carried out at the University of Turkey found a positive correlation between depression and death anxiety among people hospitalized and also among illiterate and unlearned women.⁸ Likewise in India^{30,31} a study on the role of gender and disease in death anxiety revealed that gender cannot play a role in the rate of death anxiety, but the common denominator of this research and our current research is the fact that individuals with difficult disease such as diabetes, HIV and cancer experienced higher rates of death anxiety.³⁰

In summary, it can be said that individuals with a strong self-concept have higher performance and consider defeat as a temporary status.³² They are well-equipped to avoid depression³³ and they show more resistance against desperation.³⁴ It seems that a strong self-concept is a predictive indicator of life satisfaction³⁵ and psychological welfare.³⁶ Obsession with death, to a certain degree, is an integral component of human life and it is not considered as abnormal, but similar to other kinds of fear, if the anxiety were serious, adaptation efficacy will be attenuated and it seems to be an indicator of mental disease and it is abnormal, then it has to be taken into consideration.³⁷ Therefore, low self-concept, symptoms and attributes of anxiety, depression, feeling of loneliness and embarrassment will reveal. If this circumstance continues to exist, then serious problems will be unavoidable. This matter elicits the interrelation between death anxiety, negative and dramatic and direct express.

Among the limitations of this study, is that to obtain more accurate and valid results, so it is necessary to evaluate a broader range of patients. Other limitations in practical section are summarized. For instance, some individuals were not happy to fill out a long questionnaire and also some questions that were related to cultural elements and participants did not feel

inclined to answer them or they requested to give more explanation about those questions.

To validate the results of this study, similar studies need to be carried out in other cities of the country and other researchers from different cities can hold some meetings in order to make the results more efficient. Besides, healthcare centers and hospitals collaborating with expert psychologists during the treatment process should simultaneously teach individual patients how to handle stress and the challenges they will face in their personal lives.

Acknowledgement

The authors acknowledge all the individuals who participated in this research; the head of hospital, managers and staff of Shahid Chamran Hospital and all friends and professors who made this research possible with their collaboration.

Conflict of Interest

The authors declared that they have no conflict of interest.

References

- Kleinman A, Eisenberg L, Good B. Culture, illness, and care: clinical lessons from anthropologic and cross-cultural research. *Ann Intern Med* 1978;88:251-8.
- Heinemann L, Fleming GA, Petrie JR, Holl RW, Bergenstal RM, Peters AL. Insulin pump risks and benefits: a clinical appraisal of pump safety standards, adverse event reporting and research needs: a joint statement of the European association for the study of diabetes and the American diabetes association diabetes technology working group. *Diabetes Care* 2015;38:716-22. doi:10.2337/dc15-0168
- Mohebi S, Azadbakht L, Feizi A, Sharifirad G, Kargar M. Review the key role of self-efficacy in diabetes care. *J Educ Health Promot* 2013;2:36. doi:10.4103/2277-9531.115827
- Shaw JE, Sicree RA, Zimmet PZ. Global estimates of the prevalence of diabetes for 2010 and 2030. *Diabetes Res Clin Pract* 2010;87:4-14. doi:10.1016/j.diabres.2009.10.007
- Atlas ID. International Diabetes Federation, 2013. ISBN 2930229853. 2015;7..
- Cruz II. The lived experience of insulin-dependent diabetes among adult Latinos in a primary care clinic in San Antonio. The University of Iowa 2014:1-274.
- Khawar M, Aslam N, Aamir S. Perceived social support and death anxiety among patients with chronic diseases. *Pakistan Journal of Medical Research* 2013;52:75-9.
- Doğan R, Arslantasi D, Ünsal A. Assessment of depression and death anxiety level in diabetic patients in Eskisehir, Turkey. *International Journal of Diabetes in Developing Countries* 2015;35:242-9. doi:10.1007/s13410-014-0254-3
- Longo D, Fauci A, Kasper D, Hauser S, Jameson J, Loscalzo J. Harrison's Principles of Internal Medicine, 18th Edition: McGraw-Hill Education; 2011.
- World Health Organization. Global report on diabetes. World Health Organization; 2016.
- Vivienne Wu SF, Courtney M, Edwards H, McDowell J, Shortridge-Baggett LM, Chang PJ. Development and validation of the Chinese version of the diabetes management self-efficacy scale. *Int J Nurs Stud* 2008;45:534-42. doi:10.1016/j.ijnurstu.2006.08.020
- Mousazadeh T, Iran parvar M, Motavalli R. Comparative Study of Self-Concept, Locus Control and Defense Mechanisms between Diabetic and Healthy People in Ardabil 1387. *J Ardabil Univ Med Sci* 2012;12:402-7. [Persian].
- Mazloomi SS, Mirzaei A, Mohammadi S. Study of depression prevalence in the patients with type II diabetes referring to Yazd diabetes research centers in 2008 2008;7:30-5.
- Ferro MA, Boyle MH. Self-concept among youth with a chronic illness: a meta-analytic review. *Health Psychol* 2013;32:839-48. doi:10.1037/a0031861
- Swann WB Jr, Chang-Schneider C, Larsen McClarty K. Do people's self-views matter? Self-concept and self-esteem in everyday life. *Am Psychol* 2007;62:84-94. doi:10.1037/0003-066X.62.2.84
- Bahrami N, Moradi M, Soleimani MA, Kalantari Z, Hosseini F. Death anxiety and its relationship with quality of life in women with cancer. *IJN* 2013;26:51-61.
- Lehto RH, Stein KF. Death anxiety: an analysis of an evolving concept. *Res Theory Nurs Pract* 2009;23:23-41.
- Doğan R, Arslantasi D, Ünsal A. Assessment of depression and death anxiety level in diabetic patients in Eskisehir, Turkey. *International Journal of Diabetes in Developing Countries*. 2015;35(3):242-9.
- Dalda B. The effects of relationship commitment and gender on death-anxiety among Turkish young adults: A terror management theory perspective (Doctoral dissertation, Master Thesis. METU Graduate School of Social Sciences, Ankara). 2011. 83 p.
- Taghizadeh Z, Omani Samani R, Kazemnejad A, Reisi M. Self-concept and self-discrepancy among the women receiving and donating oocyte. *Hayat* 2015;21:50-62.
- Salehi F, Mohsenzade F, Arefi M. Prevalence of Death Anxiety in Patients with Breast Cancer in Kermanshah, 2015. *Iranian Quarterly Journal of Breast Diseases* 2016;8:34-40.
- Rezaei A, Esfandiari Tashoufeh F, Sarvghad S. A study of the Relationship of eating attitudes and Self-Regulation with life style in obese and non-obese Women 2010;1:113-28.
- Arman S, Moallemi SH. Depression and self-concept in adolescents with major thalassemia 2005;23:18-21.
- Lotfi Kashani F, Taheri A, Mirzaee HR, Masoudi Moghaddam Z. Relationship between social support and self-esteem with depression and anxiety in cancer patients. *Journal Of Social Psychology (New Findings in Psychology)* 2013;7:101-15.
- Mosharraf R., Aghaee A, Hasan Zadeh A, Poor Agha Koockak M. Relationship between satisfaction and expectation with self-esteem and self-concept in patients using complete denture. *Journal of Dentistry, Shiraz University of Medical Sciences* 2007;8:60-70. [Persian].
- Samadi N, Safavi M, Mahmoodi M. Impact of quality of life education on self-concept among type 2 diabetes patients. *J Diabetes Metab* 2011;2:1-5. doi:10.4172/2155-6156.1000132
- Ramezani MA, Ahmadi K, Ghaemmaghami A, Zamani S, Saadat SH, Rahiminejad SP. Evaluation of Quality of Life Therapy Effectiveness in Contrast to Psycho-Sexual Education on Sexual Self-Concept of Iranian Women. *Iranian Red Crescent Medical Journal* 2016 (inpress). doi:10.5812/ircmj.22424
- Hughes A, Galbraith D, White D. Perceived competence: a common core for self-efficacy and self-concept? *J Pers Assess* 2011;93:278-89. doi:10.1080/00223891.2011.559390
- van Son J, Nyklíček I, Pov VJ, Blonk MC, Erdtsieck RJ, Spooren PF, et al. The effects of a mindfulness-based intervention on emotional distress, quality of life, and HbA(1c) in outpatients with diabetes (DiaMind): a randomized controlled trial. *Diabetes care* 2013;36:823-30. doi:10.2337/dc12-1477
- Madnawat AV, Kachhawa PS. Age, gender, and living circumstances: Discriminating older adults on death anxiety. *Death Stud* 2007;31:763-9. doi:10.1080/07481180701490743
- Singh C. An analytic study of death anxiety among type 2 diabetes. *Mediterranean Journal of Social Sciences* 2013;4:205-17. doi:10.5901/mjss.2013.v4n11p205
- Seligman ME, Steen TA, Park N, Peterson C. Positive psychology progress: empirical validation of interventions. *Am Psychol* 2005;60:410-21. doi:10.1037/0003-066X.60.5.410
- Ruthig JC, Haynes TL, Stupnisky RH, Perry RP. Perceived academic control: mediating the effects of optimism and social support on college students' psychological health. *Social Psychology of Education* 2009;12:233-49.
- Rasmussen HN, Scheier MF, Greenhouse JB. Optimism and physical health: a meta-analytic review. *Ann Behav Med* 2009;37:239-56. doi:10.1007/s12160-009-9111-x
- Huang CJ, Chiu HC, Lee MH, Wang SY. Prevalence and incidence of anxiety disorders in diabetic patients: a national population-based cohort study. *Gen Hosp Psychiatry* 2011;33:8-15. doi:10.1016/j.genhosppsych.2010.10.008

36. Uskul AK, Greenglass E. Psychological wellbeing in a Turkish-Canadian sample. *Anxiety, stress, and coping*. 2005;18(3):269-78.

37. Garcia L. The relationship between death anxiety and religiosity in hispanic and non-hispanic college students. 2015.