The relationship between self-efficacy and self-esteem with spiritual health in patients with diabetes mellitus

Niloufar Mikaeili[1], Hamidreza Samadifard[2]

1 Associate Professor, Department of Psychology, School of Educational Sciences and Psychology, University of Mohaghegh Ardabili, Ardabil, Iran
2 Department of Psychology, School of Educational Sciences and Psychology, University of Mohaghegh Ardabili, Ardabil, Iran

Abstract

Original Article

BACKGROUND: Diabetes mellitus is one of the most common diseases in Iran and the world. It is chronic, progressive, and expensive, and creates many complications. The present study aimed to determine the relationship between self-efficacy and self-esteem with spiritual health in patients with diabetes mellitus.

METHODS: The study was based on a descriptive correlational method. Statistical population consisted of all patients with type 2 diabetes mellitus in Ardabil City, Iran, in 2016. 108 patients with diabetes mellitus were selected as the statistical sample using the convenience sampling method. For data collection, self-efficacy, self-esteem, and spiritual health scales were used. Data analysis was made using Pearson correlation coefficient, and multiple regression tests.

RESULTS: There was a significant relationship between the self-efficacy and self-esteem with spiritual health in patients with diabetes mellitus. In addition, the results of multiple regression showed that self-efficacy and self-esteem could significantly predict spiritual health among these patients (P = 0.001 for both).

CONCLUSION: It can be concluded that self-efficacy and self-esteem are considered among the predicting variables related to spiritual health.

KEYWORDS: Self-Efficacy, Self-Esteem, Health, Diabetes Mellitus

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Introduction

Diabetes mellitus, like other chronic illnesses, causes problems which as a result, affect all aspects of the individual's life. The number of patients suffer from diabetes mellitus is more than 250 million, and it is estimated to rise up to 350 million in 2020, and up to 438 million in 2030.[1] In Iran, the Isfahan Endocrine Research Center has estimated the prevalence of diabetes about 2 to 3 percent in the general population, and up to the 7 percent in individuals over the age of 30 years.[2]

The intellectual spirit health is defined as the sense of communicating with others, having goal and purpose in life, as well as having a belief and connection with a transcendental power.[3] Patients with high spiritual health can be more adapted to their own personal problems.[4] On the other hand, when a spiritual health is in danger, a person may experience mental disorders such as anxiety, loneliness, and losing the goal of life.[5]

One of the factors that can affect the spiritual health of patients with diabetes mellitus is self-efficacy.[6] Self-efficacy is a reassurance that a person feels about doing something special. This concept affects the

Corresponding Author:
Niloufar Mikaeili
Email: nmikaeili@uma.ac.ir

level of efforts and the level of performance of the individual, both in terms of assessment of the individual's self about his/her abilities to perform an action, and enable the person to adopt health promoting behaviors and prevent harmful behaviors for his/her health.[7] The results of various studies have shown that self-efficacy plays a role in health promotion behaviors,[7] self-care behaviors,[8] endurance in dealing with problems,[9] patient,s and physical and mental health[10].

Another factor that can affect the spiritual health of patients with diabetes mellitus is self-esteem.[11] Self-esteem is a confidence in your ability to think, to withstand the initial challenges of life, to trust in your rights to succeed, to be happy, to feel worthy, to be worthy, and to enjoy the fruits of your own efforts. Self-esteem has a close relationship with the individual's mental image as well as adaptivity.[11] The results of studies have shown that self-esteem plays a role in quality of life,[12] mental health,[13] and emotional and social health[14] as well.

Considering the fact that the statistics of patients with diabetes mellitus in the world are increasing especially in the developing countries and Iran, and because self-efficacy and self-esteem play important roles in patient's mental health[10,13] assessment of the relationship between these variables and the spiritual health of patients with diabetes mellitus is also seems to be necessary. This study was conducted to determine the relationship between self-efficacy and self-esteem with spiritual health among patients with diabetes mellitus.

Materials and Methods

In this descriptive and correlational study, patients with diabetes mellitus referred to medical centers in Ardabil City, Iran, during the year 2016 were enrolled using available sampling method. The sample size of the study was 108, based on the number of variables

from G*Power software[15] (Heinrich-Heine-Universität Düsseldorf, Germany) with a mean size of 0.10, alpha coefficient of 0.05, and test power of 0.90. The inclusion criteria for the study were identification of the problem by expert physicians, not having other chronic and inflammatory diseases like cancer, or heart or lung diseases, having a least literacy to respond the diagnosis, and patient's intentional satisfaction.

The research tools used in this study were as bellow.

General self-efficacy scale: This scale is made by Schwarzer and Jerusalem and has 10 grades.[16] On this scale, for each phrase, the score between 1 (completely opposite to me) and 4 (quite similar to me) belongs to each respondent. The minimum score for each individual is 10 and the maximum is 40. The reliability coefficient of the scale has been reported by its creators to be above 0.70.[16] In Iran, the reliability coefficient of the tool was 0.84. In addition, the validity coefficient was 0.30 coincided with the Rosenberg self-esteem scale.[17]

Self-esteem scale: This scale is made by Coopersmith and has 58 articles, 8 of which are polygraph, and questions are answered altogether (Yes or No).[18] In this test, the minimum score of the individual is zero and the maximum is 50. In the calculation of the total score, the scores of 8 materials of the polygraph are not considered. The reliability of the test using the Cronbach method is 0.89.[18] In Iran, the reliability coefficient of this tool was 0.84, and Cronbach's alpha was reported as 0.88.[19]

Spiritual well-being scale: This tool is designed by Paloutzian and Ellison to measure the spiritual health of individuals and includes 20 questions.[20] 10 religious health questions and 10 other health questions are evaluated and ultimately their total spiritual health score is obtained. The answers to the questions like 6-choices Likert scale are as follows. In

questions that are positive in nature, I totally disagree with the score of 1, and I totally agree with the score of 6; and for questions that are negative, I completely disagree with the score of 6, and I totally agree with the score of 1. Therefore, the range of scores is between 20 and 120. Paloutzian and Ellison has considered the tool valid and the Cronbach's alpha coefficient reported for religious, existential, and total health scores to be 0.91, 0.91, and 0.93, respectively.[20] In Iran, the scale validity after translation into Persian language was confirmed through content validity and its reliability was calculated to be 0.82 using Cronbach's alpha coefficient.[21]

In this study, data were analyzed using Pearson correlation coefficient and multiple regression analysis via SPSS software (version 23, IBM Corporation, Armonk, NY, USA) at the significance level of $P < 0.050$.

Results

The total number of subjects was 108, from which 46 (42.6%) were men and 62 (57.4%) were women. The mean and standard deviation of self-efficacy, self-esteem, and spiritual health in patients with diabetes mellitus were as 28.39 ± 5.57, 30.33 ± 6.87, and 81.54 ± 15.32, respectively.

Pearson correlation coefficient test was used to determine the relationship between research variables. There were significant relationships between self-efficacy (Pearson coefficient: 0.51, P = 0.001) and self-esteem (Pearson coefficient: 0.60, P = 0.001) with spiritual health of studied patients.

In addition, multiple regression test was used to predict the spiritual health of patients with diabetes mellitus based on self-efficacy and self-esteem (Table 1).

Table 1. Results of Multiple regression to predict spiritual health

Variable	β	T	P	R	R²
Self-efficacy	0.28	2.9	0.004	0.64	0.42
Self-esteem	0.45	4.8	0.001		

In this regard, spiritual health of patients could be explained by predecessor variables at the level of 0.42. In addition, self-efficacy (β = 0.28) and self-esteem (β = 0.45) both had significant effect on the spiritual health of patients with diabetes mellitus.

Discussion

The results of this study indicated is a relationship between self-efficacy and self-esteem with spiritual health of patients with diabetes mellitus. Since one of the objectives of this study was to draw up a regression model based on predictive variables to explain the spirituality of patients, the results of regression showed that the mentioned variables had the potential for predicting spiritual health in patients with diabetes mellitus.

The first part of the study showed that there was a significant relationship between self-efficacy and spiritual health of patients. The results were consistent with the findings of other studies.[7-10] In explaining the result, we can say that self-efficacy affects health-related behaviors directly. Self-efficacy, due to strong beliefs about individual's ability, directly and indirectly increases self-management, leads to a sense of goodness and relaxation, and as a result increases psychological health. Individuals with high self-efficacy do not feel problems and tasks as threats, and try to overcome problems and achieve their goals. In addition, self-efficacy enhancement of patients plays an important role in patient compliance with the diet and control of diabetes mellitus, and could improve the spiritual health of patients.[9,10]

The results also showed a significant relationship between self-esteem and spiritual health of patients with diabetes mellitus. This result was consistent with the findings of other studies.[11-14] In explaining the result, people with self-esteem are usually pleased and happy in different events of life; their ability to feel good is high; and they are confident that

their efforts will result in something, and they will see most good aspects of the problem. Finally, they try their best to deal with various problems in a good way.[13,14]

Using an accessible and limited sampling method for patients with diabetes mellitus in Ardabil City, is one of the main limitations of this research. It is recommended to use random sampling method in other studies, and to conduct such researches in other cities in order to maximize the probability of reliable results.

Conclusion

It can be concluded that self-efficacy and self-esteem are among the variables that are related to the spiritual health of patients with diabetes mellitus, and have the ability to predict it.

Conflict of Interests

Authors have no conflict of interests.

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