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A Study on Negative Schemas and Resiliency of the Quality of Life for Patients with Diabetes

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ABSTRACT: The main goal of present research was to study the negative Schemas and resiliency quality of life for patients with diabetes, which was done by correlation method, Statistical society of this research included 8000 patient with diabetes in Babol city. 215 people were selected as statistical samples randomly by using Cochran` sample size calculation formula. Data was collected by using 4 questionnaires diabetes, short form quality of life (12 questions), Young` schema and resilience criterion of Kater and Davidson. In order to analyze the data, the Pierson correlation, and multiple regression and variance analysis were used. The results of the study showed that primary incompatible schemas have negative and significant relationship with quality of life, but resilience have positive and significant relationship with quality of life. Hence, regarding the results of this research, incompatible schemas and resilience have a determinant role in quality of life for patients with diabetes.
Key words: Diabetes, Negative Schemas, Resilience, Quality Of Life.

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INTRODUCTION

Diabetes is one of the most common chronic diseases, in which the psychological factors have a role, and it has been motive for various researches in the areas of medical psychology, health psychology and clinical psychology. The patient with diabetes needs physical and mental fitness and must have a new vision toward himself [1]. The previous studies state that controlling this disease requires diets and self-care behaviors in lifetime, and by continuous follow-up, they can prevent the chronic and acute effects of the disease or delay its incidence [2]. Diabetes is a complex metabolic disorder which affects 371 million people all over the world Pakistan has 6.6 million people with diabetes at present which is expected to rise to 11.4 million by the year 2030. Diabetes is associated with various potentially preventable complications like blindness, renal failure, lower limb amputations, stroke and cardiovascular disease. It is a chronic disease therefore it has a negative impact on individual's quality of life [3]. Also, the studies confirmed this issue and emphasized on the need for changes in the lifestyle of patients with diabetes to improve their quality of life [4].

The diabetes complications are the most important disease specific determinate of quality of life [2]. People with diabetes often feel challenged by their disease and its day-to-day management demands. Patients suffering from diabetes, deal with their condition on a daily bases, having to make countless decisions in an often futile effort to approach the non diabetic metabolic state 5. Diabetes therapy, such as insulin, can substantially affect quality of life positively by reducing symptoms of high blood sugar, or negatively by increasing symptoms of low blood glucose [5].

Accordingly, during 2 past decades, paying attention and considering the quality of life for patients with diabetes, have become a general attitude and a goal in countries` health and cure system, and a new approach named quality of life related to health, has been proposed in medical sciences researches [6], which is referred as a key index that should be typically considered in health projects [7].

Historically, the concept of "quality of life" is originated from Iranian, Grecian and Chinese scientists and philosophers [8] and recent studies, in this field, indicate that quality of life is one of major consequences of health [9]. So that, today in comparing effectiveness and relative value of different treatments, researches, health policy making, health services evaluations , patients treatments and patient and doctor relationship improvement, the quality of life can be measured as a high important issue [10]. Therefore, the quality of life is a broad concept which includes all dimensions of life such as health. This term that is used in various political, social and economical fields often have applications in medical studies, and according to most experts, it includes various

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physical, psychological, social, physical and spiritual aspects, which literally means how to live. Some researchers believe that this term is more complicated that can be described in a sentence, and regarding the meaning of quality of life, numerous definitions and interpretations have been proposed [11].

In this regard we can mention below definitions: quality of life is defined as the perception of individuals or groups that their needs are being fulfilled and they are not being denied opportunities to achieve happiness and satisfaction [12]. It incorporates both a cognitive component (satisfaction) and an emotional component (happiness). Chronicity of disease, dietary restrictions, signs and symptoms of diabetes; prolong illness, co-morbidities as well as financial and social constraints all contribute to the decrease in health related quality of life (HRQOL). Studies have shown that type 2 diabetes is associated with impaired QOL and all domains of HRQOL are affected with diabetes, particularly in terms of physical wellbeing as diabetes increases morbidity and decreases life expectancy (Factors found to be associated with deterioration in HRQOL include duration of diabetes, age, gender, co-morbidities, diabetes complications, hyperglycemia and treatment with insulin [2]. Quality of life is defined as individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. 'Quality of life' evaluation has emerged as an important outcome measure for chronic disease management. In this context, a large variety of generic1 and disease specific2-7 quality of life assessment tools have been validated and evaluated in diverse population settings [13].

Dey and Janki in 1996 argue, according to Grand`s theory method, that quality of life is a mental issue and reflects people`s life level and is determined by inspection and evaluation of person life conditions. This evaluation method consists of 3 components of life condition people personality and evaluation process [14], that can be defined by a set of physical, mental, social and economic welfare which are understood by person or a group of individuals [8]. As follows by aspects, definitions and models of quality of life, the range of evaluating the quality of life is very widespread. But in spite of lacking a general agreement on the definition of quality of life, most researchers agree on the 3 features of quality of life. These 3 features are: being Multi-dimensional, being mental, being dynamic [15].

Being multidimensional:

One of the main and fundamental characteristics of quality of life is its being multidimensional. From past, they considered the 3 basic dimensions of quality of life as physical, mental and social dimensions, But regarding the high emphasis on spiritual dimension of mental health, today most of experts believe that quality of life have 4 to 5 dimensions. Each of them have subsets that are as follows:

A: Physical dimension: It refers to one`s perception of his capabilities in doing daily activities which need energy consumption, and can include criterions such as mobility, power, energy, pain, sleep, rest and work capacity.

B: Mental and spiritual dimension: It covers the emotional aspects of health such as depression, fear, anger, happiness and tranquility. Some of this dimension` subsets are the following: Self-image, positive and negative feelings, religious beliefs, thinking and learning, memory and concentration.

C: Social Dimension: It is related to the individual ability to communicate with family members, neighbors and co-workers and other social groups, employment situation and general economic conditions.

D: Spiritual Dimension: It implies individual perception of the concept and meaning and goal of life.

Being mental: Quality of life depends on the individual`s expectations, emotions, beliefs and thoughts. Therefore, clear evaluation of health or well-being or being bad , is key factor in quality of life studies .In general , it can be said that the major factor determining quality of life is the perceived difference between what exist and what should be, and the mental dimension of quality of life is, that good feeling and individual satisfaction.

Being dynamic: Regarding to this definition that quality of life have a time-dependent structure, which is affected by personal experiences and his perception toward life and it is changing over time, we find that the dynamism of life is because it changes by time and depends on the changes within its environment [16].

In general, based on the mentioned content, it can be argues that quality of life related to health, depends on the effectiveness of person` physical, mental, social health from disease or its treatment. In this definition, it is emphasized on self-mentality and multi dimensions of quality of life. The quality of life related to health, represents a kind of mental perception of disease or its treatment. For this reason, patients with the same health condition, because of personal differences related to the expectations and mutual strategies, may not have identical quality of life. Quality of life has been discussed from the perspective of 3 approaches, philosophical, psychological and socio-psychological and sociological. Based on consolidation theory, 3 basic dimensions of quality of life, includes mental, existentialism and objective which interact with each other [17]. In addition, in his

perceptual model, knows the 4 major factors of family, economical and social situation, mental and spiritual situation, and physical condition being effective on quality of life. These 4 main variables can affect quality of life directly or simultaneously. However, one` perception of quality of life can affect each of above mentioned variables. In such a way that if one`s perception of his quality of life reduces, can affect his ability in his job environment and it will diminish his social and economical condition. Having poor quality of life, can affect his family relationship. Poor quality of life can cause employing ineffective adaptation and confronting mechanisms in people and subsequently it leads to increase his tensions in direct contact with the physical factors and can increase the severity of the disease in people.

Studies indicate that diabetes complications affect various aspects of patient` quality of life including mental, physical, social, economical, family life and sexual function [13] and first aim of treatment, especially in chronic disease, is enhancing the quality of life through reducing the effects of disease, and it is not necessary that the patients with chronic and hard diseases, have a low quality of life.

Health workers can affect patients quality of life by checking the health status of individuals and providing it, so that, with improvement of health status, improve their quality of life as well. Also, by measuring individuals quality of life, they can determine the negative effects of disease or treatment effects on patient`s quality of life [18]. Therefore, in chronic diseases, the primary goal of care is maximizing quality of life. Also, researches indicate that initial incompatible schema and resilience play important role toward diseases and stresses. Fundamental negative schemas and low quality of life can lead to resilience reduction in disease, and, individuals` resilience and methods of confronting and compatibility with life changes and the tensions from illness is different among people.

In spite of to the fact that previous researches have noticed the quality of life in patients with diabetes , less researches have noted the fields and factors affecting quality of life of patients with diabetes. On the other hand, regarding to the fact that diabetes will never be treated and patients should monitor this situation and continue to live in these conditions at the best way possible, a proper quality of life can, itself, can lead to better self-care behavior by patients. In this regard, it will be necessary that, the affecting factors on quality of life in these patients be identified, so that subsequently, educational interventions can be designed and implemented for these patients, and the quality of life in these patients is effective. Therefore, present research is seeking to answer this question: is there a relationship between negative schema and resilience and quality of life for patients with diabetes? Are schema-centered educational interventions and resilience enhancement, effective on improving the quality of life for patients with diabetes?

MATERIAL AND METHODS

Society, sample and sampling method: With regard to the fact that the aim of present research, was to study the relationship between negative schema and resilience and quality of life for patients with diabetes, the method of present study is descriptive which is performed by correlation method. Statistical society of present research includes all patients with diabetes in Babol city (8000 people) so that 215 individuals were selected based on Cochran formula and simple random sampling method.

Research material and data collection method

In this research, 4 questionnaires have been used for collecting data and information, which are:

The questionnaire of evaluation of attitude toward diabetes: This questionnaire have 7 questions which evaluates one`s thoughts and feelings related to the diabetes, that the validity and stability of this questionnaire is confirmed by Besharat et al. [19] using content validity method and Cronbach's Alpha, in which alpha is reported 0.84.

Resiliency criterion: This criterion is provided and arranged by Kater and Davidson (2003) which measures the sub-criterions (Sense of personal ability, resistance toward negative effects, positive acceptance of change, the belief in individual instincts, the sense of social protection and security, spiritual faith, and pragmatic approach to the methods of solving). The validity and stability of this questionnaire is confirmed by Besharat et al. [19] using content validity method and Cronbach's Alpha, in which alpha is reported 0.84.

The questionnaire of short form quality of life (12 questions): This questionnaire, measures quality of life regarding the overall perception of one`s health, physical functioning, physical health, emotional problems, bodily pain, social functioning, vitality and energy of life and mental health.

The questionnaire of Young schema-short form (SF-SQ)

Normalization of the questionnaire was conducted by Ahi [2] on 387 students at Tehran University that the amount of Cronbach's alpha was reported between 0.97-0.98.

CONCLUSIONS

In this part, first, the general hypothesis of the research has been studied, and in following, the multiple regression analysis method has been used to study the prediction ability of variables, the results of which is reported in below tables.

Project Hypothesis

There is a relationship between negative schemas, resilience and quality of life in patients with diabetes.

According to Table 1, since the correlation`s coefficient between the variables of negative schemas and quality of life has been measured: -0.127 and the P value equal to: 0.026, it is reported that this amount of error level 0.05 is significant. Therefore, it can be concluded that there is a significant and reverse relationship between negative schemas and quality of life for patients with diabetes. Meanwhile, the correlation`s coefficient between resilience and quality of life was 0.260, which is significant in error level of 0.05, meaning the value is lower than 0.05. So, it can be said, by 95% confidence, that there is a significant relationship between variables of resilience and quality of life.

Also, for better measuring the relations between variables, the variables of resilience and negative schemas have been controlled and the partial correlation coefficient was performed t, the results of which, is reported in Table 2.

Table 1. Pierson correlation between resilience , negative schemas and quality of life

No	Standard deviation	Mean	P=value	(a)Error	Pierson coefficient	Variables
215	14.811	157.59.	0.26.	0.05	-0.127	Negative schemas and quality of life
	2.716	32.5				
	4.901	21.10	0.003	0.05	0.260	Resilience and quality of life
	3.675	32.5				

Table 2. Partial correlation of research variables

Freesom degrees	Pvalue	Pierson coefficient	Variable
212	0.260	-0.127	Negative schemas and quality of life
	0.55	-0.105	Negative schemas and quality of life by controlling the resilience
	0.003	0.260	Resilience, quality of life
	0.004	0.255	Resilience, quality of life by controlling the variable of negative schemas

According to Table 2, the correlation of negative schemas and quality of life without control factor, has been -0.127. But after controlling the resilience variable, the correlation of negative schemas and quality of life reached -0.105 and reduced. Therefore, it can be said that resilience variable is an important and amplifier variable, that by its existence, improves the relation and correlation of these 2 variables. Also, with regard to table 2, it can be said that the correlation of resilience and quality of life without control factor has been 0.260. But after controlling negative schemas variable, the correlation of resilience and quality of life has reduced slowly. Therefore, it can be said that the effect of negative schemas is very low on the correlation between resilience and quality of life and doesn't have real effect on correlation coefficient.

Multiple regression analysis has been used to measure the simultaneous effect of 2 variables of the prediction of resilience and negative schemas in linear form, also time in explaining Variable criteria (quality of life for diabetics), the results of which is reported in Table:

Table 3. The results of multiple correlation coefficients of negative schemas and resilience

Model	Determination coefficient	Adjusted determination coefficient	Sig.
1	0.147	0.135	0.000

According to the mentioned information in Table 3, the results of tables 5-4 indicate that linear combination of negative schemas and resilience variables is 0.38 and determination coefficient is 0.15 which is significant at 0.000 level, and in general, 2 variables of negative schema and resilience could explain 15% of changes of quality of life variable.

Table 4. The results of multiple regression analysis for negative schemas, resilience and quality of life

Prediction variable	Criterion variable	B	SE	Beta	T	Sig.
Negative schemas	Quality of life	-0.2368	0.063	-0.306	8.258	0.001
Resilience		0.2206	0.194	0.386	-0.198	0.001

According to Table 4, the regression coefficient of prediction variable indicates that negative schemas variable with beta coefficient: -0.30, can predict quality of life for patients with diabetes negatively and significantly. Meanwhile, resilience with beta coefficient: 0.38 can predict the quality of life for patients with diabetes. Also, in order to understand this issue that, if there is any difference between quality of life in men and women with diabetes, the Independent T test has been applied, the results of which are reported in below table.

Table 5. The results of Independent T test for comparing the quality of life for diabetics based on gender

Significance level	Degree of freedom	Statistical value t	Standard deviation	Mean	No	Lovin test		Group statistical index
						Significance level	F	
0.112	214	1.07	9.1	3.05	571	0.132	1.6	female
			10.6	32.2	58	0.132		Male

Information in Table 5 indicates that the value of Lovin test is bigger than 5% at significance level. As a result, no significant difference was observed between variances of 2 groups and the variances were equal, and the conditions of using T-test were performed. The results of independent T-TEST indicates that the calculated T value, was 1.07, since the obtained sig is bigger than 0.05, so the hypothesis of this research is rejected and it can be said that there is no significant difference between the quality of life of men and women with diabetes.

DISCUSSION AND CONCLUSION

The aim of this research is to study the negative schemas and resilience quality of life in patients with diabetes. The findings of present research , suggest that there is reverse and significant relationship between negative schemas and quality of life for patients with diabetes .meaning, if the negative schemas increase , the quality of life for diabetic patients decreases .Meanwhile, there is a positive and significant relationship between resilience and quality of life in diabetic patients .Also, the results of this research indicate that negative schemas and resilience can explain and predict the quality of life for diabetic patients and there is no significant difference in quality of life between diabetic men and women .The findings of this research is inconsistent with the results of researches of Jackson and Firtko [14], Akhani et al. [20], Hiemdal et al. [21] and Afkhami Ardakani et al. [22] have confirmed all of them.

Therefore, we can say that resiliency can help people in stressful conditions in terms of dealing with diabetes, in order to maintain their quality of life at a desirable level.

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