The Influence of Cognitive Therapy on Quality of Life of People with Diabetes Melitus

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Abstract: People with diabetes mellitus usually experienced disappointment and anxiety about the disease, causing the quality of life to decline. The purpose of this study is to describe the results of cognitive therapy on the quality of life of diabetes mellitus clients. Cognitive Therapy is a form of therapy that can train clients to change negative ways of thinking due to disappointment and failure so that clients can be better and can be productive again. Cognitive Therapy is carried out in the form of counseling and is oriented towards changing negative thoughts into positive ones. This research uses quasi experiment with pre and post test without control group method, it means that data collection is done before and after intervention with cognitive therapy. Most of the aged 48-51 years (76%), education (44%) were junior high, female gender was 13 respondents (52%) and duration> 3 years 10 respondents (40%). Quality of life before therapy average score 103.96 with positive life quality of 17 respondents (68%). Quality of life after therapy average score of 111.60 with positive life quality of 22 respondents (88%). There is influence of cognitive therapy on improving quality of life of people with diabetes mellitus (p-value 0.035).

1 BACKGROUND

Diabetes Mellitus (DM) is one of the non-communicable diseases whose prevalence is increasing from year to year. DM is often referred to as the great imitator, because this disease can affect all the organs of the body and cause various complaints. Symptoms vary greatly and can arise slowly, so patients are not aware of any changes.

Results of basic health research (Riskesdas) in 2013 prevalence of diabetes mellitus in Indonesia based on interview who was diagnosed with a doctor by 1.5 percent. Diabetes Mellitus is diagnosed by a doctor or a symptom of 2.1 percent. The highest prevalence of diabetes diagnosed by doctors is in DI Yogyakarta (2.6%), DKI Jakarta (2.5%), North Sulawesi (2.4%) and East Kalimantan (2.3%). The prevalence of diabetes diagnosed by doctors or symptoms is highest in Central Sulawesi (3.7%), North Sulawesi (3.6%), South Sulawesi (3.4%) and Nusa Tenggara Timur 3.3%.

Diabetes Mellitus as a chronic illness has psychological effects such as decreased quality of life. Psychological conditions are negative if not done because the treatment will aggravate the condition of the illness and increase the risk of death, it can be formulated research problem is to develop Cognitive Therapy (CT) to improve the quality of life of Diabetes Mellitus clients.

Cognitive Therapy (CT) is basically used to change a person's thinking about a problem and this helps people see the problem in a different and positive perspective. CT is very popular and is considered one of the best therapies for many mental disorders such as obsessive compulsive disorder, OCD, anxiety, phobia, depression, post traumatic stress disorder, bulimia and schizophrenia. The results of Gonzales (2010) study on DM patients who received CT after treatment showed decreased severity of depression and increased glycemic control. Research on the effects of CBT on depression: the role of problem-solving assessment conducted by Chen, Jordan, and Thompson (2006) suggests that CBT improves the ability to solve problems and reduce depression levels.

2 METHODS

This research uses quasi-experiment with pre-test and post-test one group method. Population and

samples in this study were all patients with Diabetes Mellitus which amounted to 54 people. Sampling using total sampling method. Data collection using questionnaires and giving intervention in the form of cognitive therapy, which is a therapy to change the negative auto mind into positive. The analysis using a test dependent sample t-test

3 RESULTS

3.1 Respondents' Characteristics

Based on Table 1, the largest age of respondents in this study was age 48-51 years, amounting to 29 respondents (53.7%). While at least 40-43 years age amounted to 10 respondents (18.5%). The most respondents' education in this study was graduated from junior high school as many as 21 respondents (38.9%) and not school or drop out as much as 6 respondents (11.1%). The most sex group is women that is 34 respondents (63%). Meanwhile, the male gender was 20 respondents (37%). Regarding the duration of the disease, the most respondents suffered more than 3 years of illness as many as 32 respondents (59.3%) and at least 1 to 2 years of illness as many as 10 respondents (18.5%).

3.2 Univariate Analysis

3.2.1 Quality of Life

Table 2 shows that respondents who have positive life quality are 29 respondents (53.7%) and negative life quality of 25 respondents (46.3%). The table also shows that respondents who have a positive quality of life as much as 43 respondents (79.6%) and negative life quality of 11 respondents (20.4%).

Based on Table 3, it can be concluded that quality of life pre intervention average score is 103.96 with standard deviation 15.001. The lowest score was 76 and the highest score was 134. With 95% confidence level, the mean pre life quality score of pre intervention was between 97.77 and 110.15. While the concept of self-post intervention average score was 111.60 with a standard deviation

Table 1: Demographic Characteristics (n = 54).

Characteristic	Category	Frequency	Percentage (%)
Age	40-43	10	18.5
	44-47	15	27.8
	48-51	29	53.7
Education	No school/ dropout	6	11.1
	Elementary School	13	24.1
	Junior High School	21	38.9
	Senior High School	14	25.9
Sex	Male	20	37.0
	Female	34	63.0
Illness Duration	1 year-2 years	10	18.5
	> 2 years-3 years	12	22.2
	> 3 years	32	59.3

Table 2: Quality of life data pre and post-test (n = 54).

Characteristic	Category	Frequency	Percentage (%)
Pre-Test	Positive	29	53.7
	Negative	25	46.3
Post-Test	Positive	43	79.6
	Negative	11	20.4

of 12.196. The lowest score was 80 and the highest score was 132. With a 95% confidence level, the mean post intervention quality score was 106.57-116.63.

3.3 Bivariate Analysis

Bivariate analysis will describe whether there is a difference in quality of life before and after therapy using a test dependent sample t-test. This bivariate analysis is performed to prove the hypothesis that has been formulated.

Table 3: Results of quality analysis of pre life and post intervention (n = 54).

Variable	Mean	Median	SD	Min-Max	95 % CI
Quality of Life	103.96	105.00	15.001	76 – 134	97.77 – 110.15
Quality of Life	111.60	111.00	12.196	80 – 132	106.57 – 116.63

Table 4: Average quality score distribution before and after following therapy.

Variable	N	Mean	SD	p-value
Quality of Life Pre Intervention	54	103.96	15.001	0.035
Quality of Life Post Intervention	54	111.60	12.193	

From the results of the analysis using dependent sample t-test showed that the average score of quality of life before following the therapy was 103.96 and after following the therapy of 111.60 with a difference of -7.64 means that there is an increase in quality of life after following therapy with an average increase of 7.64. The result of calculating the value of "t" is 2.231 with p-value 0.035 (2-way test) smaller than alpha (0.05) meaning that there is statistically significant difference between mean of quality of life score before and after therapy (Table 4).

4 DISCUSSION

4.1 Age

The results showed that the largest age of respondents in this study was age 48-51 years, amounting to 29 respondents (53.7%). While at least 40-43 years age amounted to 10 respondents (18.5%). Life expectancy from year to year has increased, in 2010 life expectancy is 67.4 years and 2020 is estimated to be 70.2 years. Based on the existing results that the increasing age has nothing to do with quality of life. Negative quality of life that existed in the respondents due to several factors that did not participate researched in this study.

4.2 Education

The result of the research shows that most of respondent's education in this study is graduated from junior high school as much 21 respondents (38.9%) and no school / drop out as much as 6 respondents (11.1%). The highest education of diabetes mellitus is graduated from junior high school. Patients with diabetes mellitus who graduated from junior high school experience confusion in assessing the ability that is in him because of the limited knowledge received so that the effect on taking action in the face of illness and quality of life is also influenced by the ability of his judgment.

4.3 Sex

The results showed that the largest proportion of respondents were women. This is in line with the prevalence that women are twice as likely to have diabetes mellitus. While the sex does not have a significant relationship to the quality of life.

4.4 Duration of Illness

The results showed that most respondents suffered more than 3 years of pain as many as 32 respondents (59.3%) and at least 1 to 2 years of illness as many as 10 respondents (18.5%). Long suffering pain affects the ability of self in determining attitude when facing suffering (Bastaman, 2007). A positive quality of life is formed in the sufferer with the longest illness through self-view and positive experience. Thus, respondents can define attitudes and change the idea that there is a wisdom behind suffering.

4.5 Quality of Life

The results can be seen that most people with diabetes mellitus have a positive quality of life. Data obtained from 54 respondents, on the measurement before the cognitive therapy intervention, the result of positive quality of life was 29 respondents (53.7%) and the measurement after the cognitive therapy intervention was found the result of the positive life quality was 43 respondents (79.6%).

Respondents who have a positive quality of life can master new experiences and previous experiences. Past experiences can affect a person's quality of life. New experiences are gained when individuals interact with their new surroundings (Perry & Potter, 2009 and Alimul, 2006). Quality of life is formed because there is a feeling of being able to do something, personal and interpersonal relationships, personal characteristics that affect self-expectations and a stable self-realization can lead to the purpose of adult development (Perry & Potter, 2009).

4.6 Effect of Cognitive Therapy on the Quality of Life of Diabetes Mellitus

Based on the results of the study, the analysis using the dependent sample test showed that the average self-concept score before following the therapy was 103.96 and after following the therapy of 111.60 with a difference of -7.64 means that there is improvement of quality of life after following therapy with average increase of 7.64. The result of calculating the value of "t" is 2.231 with p-value 0.035 (2-way test) smaller than alpha (0.05) meaning that there is statistically significant difference between mean of quality of life score before and after therapy.

According to the above calculation results, statistically giving intervention has an effect on quality of life. There is improved quality of life before and after therapy. Quality of positive life indicates the existence of self-acceptance where individuals with a positive quality of life know themselves well. Individuals who have a positive quality of life can understand and accept a number of facts about him so that the evaluation of yourself to be positive and can accept themselves as they are. Individuals who have a positive quality of life will design goals that are in accordance with reality, that is, goals that are likely to be achieved, able to face the future life and assume that life is a process of discovery.

5 CONCLUSIONS

This study concludes that cognitive therapy has effect to the quality of life of people with diabetes mellitus.

Regarding the recommendation, professional nurse who has a particular scientific specialization should be able to apply the knowledge and ability to utilize the knowledge held in order to support the successful development of the profession. The giving of soul-nursing specialist therapies to be more activated both in the area of healthy mental nursing, nursing risk of mental problems and mental nursing care area. The results of this study can be used as basic data for researchers and further research. For further research can develop some methods and types of research on cognitive therapy with different areas and respondents. For educational institutions to provide more opportunities to researchers in order to develop science. Families and communities should be aware that their role in assisting and caring for clients is necessary. Continuous psychic and moral support greatly determines the client's health and compliance in medication and diet.

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