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Effectiveness of Cognitive Ayurveda Therapy (CAT) against improving quality of life in patients with type 2 diabetes mellitus at RSU Royal Prima Medan

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ABSTRACT

Maintaining normal blood sugar levels is not enough to treat diabetes mellitus. According to Yudianto, Hana, and Ida (2018), people with diabetes mellitus will carry the disease with them throughout their lives, affecting their health issues related to physical, mental, social, and environmental forms of quality of life. This research is compares persons including type 2 diabetes mellitus' quality of life before and after CAT, in addition to calculate the effectiveness of cognitive Ayurvedic therapy in enhancing this quality of life. As reported by Lapau in Airlangga (2018), this research consists of a number of components that are combined to obtain information or facts to address research issues or questions. A significant diversity among the pre- and post-test values was found by the Paired Sample T-Test, with a significance level of p 0.000, 0.05 (2-tailed). There was a striking difference among the two tests, so the study's null hypothesis (Ho) was denied and the alternative hypothesis (Ha) was acquired. Ayurveda therapy (CAT) has the highest level of effectiveness for improving respondents' quality of life, with very good results in health issues related to physical, mental, social, and environmental aspects. The Chi-Square pre- and post-test, with a p-value of 0.000, produced the following outcomes at RSU Royal Prima Medan, the persons including type 2 diabetes mellitus' quality of life is significantly different previously and after treatments.

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INTRODUCTION

Diabetes occurs when a person's body cannot use insulin levels effectively and cannot control the amount of glucose in their blood. This causes the person to have an excessive amount of glucose in their blood. (Chaidir in the journal Nursing Science 2021).

According to Saputri, Setiani, & Dewanti 2018, WHO predicts that some 150 million people globally have diabetes. The majority of diabetics come from developing countries where the number has increased every year. Up to 21 million people in the United States have been diagnosed with diabetes, and 8.1 million people in the United States have diabetes. (Andreas Pradita et al, 2020).

The Basic Health Survey (RISKESDAS) revealed that the total number of people with diabetes mellitus in Indonesia increased by 1.5% in 2018 based on a medical diagnosis made at the age of 15. This shows an increase of 2.0%. The Jakarta area has the highest diagnosis rate of 3.4%, while the NTT region has the lowest rate of up to 0.9%. Several provinces in Indonesia have experienced an increase in diabetes cases. One of these provinces is South Sulawesi, where diabetes is the fifth leading cause of death and the fourth most common non-communicable disease with a prevalence rate of 6.65 percent. As the city of Makassar, the cause of death is 5.

According to the 2018 Basic Health Survey when the health office diagnosed diabetes or its symptoms in the Pakpak Bharat area (1.6 percent), Medan (1.2 percent), Tebing Tinggi (1.5 percent), Padang Sidempuan (1.3 percent). percent), Mandaling Natal (by 1.3 percent).), and Pematang Siantar, the prevalence of diabetes mellitus has increased in North Sumatra Province. Based on these data, it shows that the number of people with diabetes in Medan City is very high, with 10,347 diabetics visiting 39 Puskesmas. (STPTM Medan City Health Service in Girsang 2019).

Maintaining normal blood sugar levels is not enough to treat diabetes mellitus. According to Yudianto, Hana, and Ida 2018, diabetes mellitus will affect a person's quality of life throughout his life affecting his physical, psychological, social and environmental health. Acceptance of their situation and the knowledge that their lives will be controlled by diet, drugs, and insulin are factors that influence the critical stage of the disease which is characterized by physical, social, and psychological imbalances for people with diabetes mellitus. A person with diabetes mellitus goes through a critical stage that makes him depressed and causes him to take insulin, drugs and diets for years. In the end he stopped caring about the situation. (in Dixon, et al, 2018).

Treatment of diabetes can be divided into two categories based on the conditions mentioned above: pharmacological therapy and complementary therapy. Pharmacological therapy studies the use of drugs to diagnose, prevent and treat disease. The integration of traditional medicine with modern medicine is known as complementary therapy. With pharmacological treatment of diabetic patients consisting of oral/injectable drugs, the most widely used diabetes drug is a combination of oral biguanide anti-diabetic drugs and insulin, as much as 32% is given along with diet and physical activity (a healthy lifestyle).). Biguanides taken orally are drugs that are usually prescribed for people with type 2 diabetes (Gunawan in the Journal of Pharmaceutical Sciences 2021). Exogenous insulin supplements that support the normal function of carbohydrate metabolism are known as self-administered insulin. Because of the variability in how insulin reacts to different people, the types of insulin preparations and the injection intervals given to patients are individualized and require prior dose adaptation. Soelistijo in the 2021 edition of the Journal of Pharmaceutical Sciences. Then, complementary therapy is also an alternative therapy because it can improve a person's quality of life and is closely related to a treatment or intervention that is usually used in nursing. Ayur means "life" and Ved means "knowledge" in Ayurvedic medicine. Ayurveda is an Indian philosophical medical system that has been around for thousands of years. A variety of different herbs are used in medicine. The study of the balance of body, mind, and spirit, as well as emotions and psychology, is a focus of holistic therapy. Vegetable therapy, nutrition, exercise, yoga, massage, aromatherapy, tantra, mantras and meditation are part of Ayurveda (Susana, SriHendarsih:ECG, 2011). Based on the influence of the quality of life of people with type 2 diabetes mellitus which affects a critical stage due to lifestyle, drugs, and irregular diets, the researchers are interested in examining this condition by applying the Effectiveness of Cognitive Ayuveda Therapy (CAT) to Improving the Quality of Life in Diabetes Patients Mellitus Type 2. aromatherapy, tantra, mantra, and meditation are part of Ayurveda (Susana, SriHendarsih:ECG, 2011). Based on the influence of the quality of life of people with type 2 diabetes mellitus which affects a critical stage due to lifestyle, drugs, and irregular diets, the researchers are interested in examining this condition by applying the Effectiveness of Cognitive Ayuveda Therapy (CAT) to Improving the Quality of Life in Diabetes Patients Mellitus Type 2. aromatherapy, tantra, mantra, and meditation are part of Ayurveda (Susana, SriHendarsih:ECG,

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This research aims to determine the Effectiveness of Cognitive Ayurveda Therapy (CAT) to improve the quality of life of people with type 2 diabetes mellitus at RSU Royal Prima Medan. Knowing the quality of life of people with type 2 diabetes mellitus before undergoing CAT. Knowing the quality of life of type 2 diabetes mellitus patients after undergoing CAT. Knowing the cognitive effectiveness of Ayurveda therapy to improve the quality of life of people with type 2 diabetes mellitus.

RESEARCH METHOD

Based on Lapau in Airlangga (2018), research design is one that combines a number of components to collect data or information to respond to research questions or problems. Cross-Sectional descriptive research was used in this study. A questionnaire for people with type 2 diabetes and a questionnaire on quality of life variables based on the World Health Organization's Quality of Life were used in this cross-sectional study. This activity was carried out before and after therapeutic use to see if cognitive Ayurvedic treatment for type 2 diabetics improves their quality of life. The survey and its location were carried out at the Royal Prima Medan General Hospital scheduled for February 2023.

The research population is all diabetic patients treated at Royal Prima Hospital for the last 3 months, from November 2022 to January 2023 as many as 77 type 2 diabetes sufferers. The sample for the number of characteristics obtained from the population with type 2 diabetes mellitus was 30 people, the study This is calculated using the WHOQOL-BREF formula. Determination of the sample was taken using the notatmodjo formula, 2010

Sample Test Formula:

$$n = \frac{N}{1+N(d2} \quad (1)$$

Information :
n = Number of Samples Wanted
N = Total Population
d = Level of Confidence

Research with this data is that researchers come directly to observe type 2 diabetes patients by using a questionnaire to measure their quality of life. Respondents' names, addresses, gender, age, marital status, education and profession are all listed in Questionnaire A. The WHOQOL-BREF Questionnaire is used in Questionnaire B, a survey that measures quality of life. The four areas, namely physical, mental health, social relations and the environment, are divided into 26 parts that form the scale. The standard WHOQOL – BREF (World Health Organization Quality of Lifes – BREF) questionnaire was used in the study, which had 26 questions broken down into five categories; physical health, mental health, social relations, environment, and quality of life. Each question will be given a score of 1-5 which is indicated by the response of the estimation scale (Nursalam, 2018).

The first and second questions of the questionnaire focused on general health and quality of life. Physical domain 1 = question no 3,4,10,15,16,17,18. Psychology Domain 2 = 5,6,7,11,19,26. Social domain 3 = 20,21,22. Domain 4 environment = 8, 9, 12, 13, 14, 23, 24 and 25. Raw scores were then calculated for each domain score using the domain score calculation equation from the WHOQOL-BREF survey results. when the raw score for each domain was received, the WHOQOL-BREF conversion table was then used by the researcher to convert the score, then counted the sum of each domain and then divided it by 4 to get the final result of converting the quality of life score. Scores can be assigned by following standards which include:
Score 0-20 = Very Poor Quality of Life Score 21-40 = Poor Quality of Life

Score 41-60 = Moderate Quality of Life Score 61-80 = QualityGood Life

Score 81-100 = Very Good Quality of Life.

Data he obtained from the questionnaire. Researchers must check the questionnaire or repair the data that has been collected if there are errors or deficiencies. After editing, then coding is done by changing the data in the form of sentences or letters into two numbers. If the data is complete then marked according to the variable. Data was edited, coded, tabulated and inputted into a computer program before being analyzed. The analysis used is Univariate Analysis and Bivariate Analysis

RESULTS AND DISCUSSIONS

Univariate Analysis

Table 1. Characteristics of Type 2 Diabetes Mellitus Patients Based on Age, Gender, Education, and Occupation at RSU Royal Prima Medan

Characteristics of Respondents	Amount (n)	Percentage (%)
Age		
≤ 60 Years	13	43
>60 Years	17	57
Total	**30**	**100**
Gender		
Man	18	60
Woman	12	40
Total	**30**	**100**
Education		
No school	1	3
SD	2	7
JUNIOR HIGH SCHOOL	6	20
SENIOR HIGH SCHOOL	16	53
PT	5	17
Total	**30**	**100**
Work		
civil servant	3	10
Private employees	6	20
Self-employed	14	47
IRT	6	20
Farmer	1	3
Total	**30**	**100**

Based on table 3.1 above, it shows the results of the characteristics of the majority of respondents aged >60 years, totaling 17 people (57%) and minority respondents aged ≤60 years, numbering 13 people (43%). Based on gender, the majority of male respondents were 18 people (60%) and the minority female respondents were 12 people (40%). Based on the education of the majority of respondents, 16 people (53%) were high school seniors and 1 person (3%) did not attend school. Based on the work of the respondents, the majority of them were self-employed, 14 people (47%) and the minority worker respondents were farmers, 1 person (3%).

Table 2. Distribution of Quality of Life Data for Type 2 Diabetes Mellitus Patients Before undergoing CAT at RSU Royal Prima Medan

Pretest data

Category	Amount (n)	Percentage (%)
Very bad	0	0
Bad	1	3
Currently	16	53
Good	13	43

Very good	0	0
TOTAL	**30**	**100**

Based on table 3.2 above, the pre-test data for quality of life before undergoing CAT for the category of respondents with a poor quality of life amounted to 1 person (3%), then respondents with a moderate quality of life numbered 16 people (53%), finally respondents with a good quality of life numbered 13 people (43 %).

Table 3. Distribution of Quality of Life Data for Patients with Diabetes Mellitus Type 2 After undergoing CAT at RSU Royal Prima Medan

Post Test Data

Category	Amount (n)	Percentage (%)
Very bad	0	0
Bad	0	0
Currently	0	0
Good	16	53
Very good	14	47
TOTAL	**30**	**100**

Based on table 3 above, it was obtained post-test data for quality of life after undergoing CAT in the category of good quality of life for 16 people (53%) and for the category of very good quality of life for 14 people (47%).

Bivariate Analysis

Paired Sample T-Test reveals a different significance between initial and final values at the significance stage p = 0.000, <0.05 (2-tailed). Where there is a striking difference between the two tests, namely the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected.

Table 4. Bivariate Analysis

test	n	Statistics Descriptive	Paired T-Test		
		M (Std.D)	t	df	Sig.(2-tailed)
Pre-Test	30	83.66 (9.15)	-24.123	29	0.000*
Post-Test	30	106.23 (6.76)			

P < 0.05: significant value

Quality of Life of Diabetic PatientsType 2 Mellitus Before Undergoing CAT

Research conducted at RSU Royal Prima Medan with type 2 diabetes mellitus found that 57% of patients had limited activities and only lay in bed and experienced mood changes, no energy, low self-esteem, and always full of negative thoughts. affect the quality of life that can affect in undergoing treatment. Based on Wardani in the 2019 Integrated Nursing Journal, someone with low activity will have a risk of diabetes 3 times greater when compared to those with high activity. According to Yudianto, Rizmadewi, and Maryati 2010 in the Kusuma Husada Health Journal 2020 diabetes mellitus is the most common form of depression, and inadequate processes can have a significant impact on quality of life.

According to Smeltzer & Nuda 2008 in the 2020 Kusuma Husada Journal, the psychological domains that can occur are hopelessness, loneliness, helplessness, fear, anger, sadness, shame and guilt, relying on others, feeling uncomfortable, confused and in pain. According to the findings of a study conducted in 2008 by Tang, Brown, Funnell, and Anderson in the Journal of Psychology 2020, social support for people with diabetes has a significant impact on self-management behavior and quality of life in diabetes treatment. The interaction of sensitive factors such as genetics and environmental exposure is one of the many factors that contribute to the high incidence of type 2 diabetes mellitus. It is estimated that environmental factors will increase the risk factors for type 2 diabetes 2 and ideal life adjustments, in addition to a disproportionate variety of food, regular body activities also result in the risk of diabetes mellitus according to Awad in the 2019 Scientia Journal.

Quality of life becomes a factor in the research process because it is related to the patient's ability to adapt to the demands of the situation. If a patient has a high quality of life, they will have no difficulty adapting to existing pressures, thereby reducing stress; on the other hand, if patients have a low quality of life, they will not easily adapt to the pressures, thereby causing greater stress. Patients will find it difficult to adapt to their disease because of the low quality of life, and the more negative the perception of the disease, the more demanding the situation.

Quality of LifeType 2 Diabetes Mellitus Patients After Undergoing CAT

Research that has been carried out on people with type 2 diabetes mellitus at RSU Royal Prima Medan which provides Cognitive Ayurveda Therapy (CAT) to improve the quality of life of patients that affect physical, psychological, social and environmental health. The first thing that is done is to raise the spirit of life in patients by educating that all standards of life are hope, pleasure and concern. Providing Cognitive Ayuveda Therapy in the form of massage, listening to music, meditation and paying attention to nutrition can make patients feel calmer, relaxed and have positive thoughts about themselves.

The majority of respondents already have a good quality of life because they know how to treat type 2 diabetes so they can live a good life. People who take the survey will have good psychosocial skills. A person's physical, mental, social and environmental health all impact their quality of life. Cognitive and emotional aspects of illness coping strategies are also closely related to the psychological state of type 2 diabetes mellitus patients, which indirectly impacts their drug-seeking habits. Patients with type 2 diabetes mellitus who carry out subjective assessments or who are aware that they are able to maintain this way of life are more likely to adhere to treatment, which in turn affects the patient's quality of life.

Effectiveness of Cognitive Ayurveda Therapy on Improving the Quality of Life of Type 2 Diabetes Mellitus Patients

Based on the research findings that have been done, look at the results of data from table 3.3 and the final results in table 3.4 regarding the effectiveness of cognitive Ayurveda therapy for the quality of life of people with type 2 diabetes mellitus. improving the quality of life for people with type 2 diabetes mellitus at RSU Royal Prima Medan, namely a = 05 and df = 2, based on research findings it is known that the value of p = (0.000), thus it can be concluded that there is significant effectiveness to improve the quality of life for people with type 2 diabetes mellitus .

CONCLUSION

Conclusions were obtained about the efficacy of cognitive Ayurveda therapy in increasing the quality of life for people with type 2 diabetes mellitus at RSU, based on findings that had been carried out at RSU Royal Prima including: Quality of life for type 2 diabetes mellitus patients before undergoing CAT the majority were moderate. The quality of life in patients with type 2 diabetes mellitus after undergoing CAT is mostly good. The effectiveness of Cognitive Ayurveda Therapy (CAT) is proven effective.

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