
THE EFFECT OF ASSERTIVE BEHAVIOR ON DEPRESSION IN DIABETES MELLITUS PATIENTS

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ABSTRACT

The purpose of research is to know about the effect of assertive behavior to depression on diabetes mellitus patients. This study used pre-experimental design with a one-group pre-post test t design. The sample used is 17 people selected by purposive sampling technique. The results showed that the category of depression before being given assertive behavior treatment mostly in the moderate depression as many as 11 people (64.7%), and after being given assertive behavior showed that a decrease in the number of moderate depression to be 9 people (52.9%). The results of this study were tested by paired-sample t-test statistic, the results obtained value (p) = 0.015. The conclusion of research is assertive behavior can decrease the level of depression in patients with diabetes mellitus.

KEYWORDS

Assertive behavior, depression, diabetes mellitus



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INTRODUCTION

One of the types of diseases that attract the attention of the public is Diabetes mellitus. A person who has diabetes mellitus tends to experience various changes in his life. Diabetes mellitus is a chronic disease that occurs when blood glucose levels rise because the body cannot produce enough insulin (Alberti & Emmons, 2017). Insulin is an important hormone produced in the pancreas gland of the body, and transports glucose from the bloodstream to the body's cells where glucose is converted into energy. Lack of

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insulin or the inability of cells to respond to insulin causes high blood glucose levels, or hyperglycemia, which is a hallmark of diabetes mellitus (Bali, 2016). Common signs and symptoms experienced by patients with diabetes mellitus are frequent urination (polyuria), increased hunger (polyphagia), excessive thirst (polydipsia), weight loss, fatigue, lack of focus, slow wound healing, vomiting, and abdominal pain (Bali, 2016) (Lin et al., 2014).

According to a survey conducted by IDF (2017), globally, in 2017 there were 8.8% (425 million people) of diabetes mellitus sufferers, it is estimated that in 2045 it will increase to 629 million people. Indonesia ranks 6th with the number of diabetes mellitus patients around 10.3 million (Bali, 2016). Data from the Bali Provincial Health Office in 2016 recorded the number of visits by diabetes mellitus patients as many as 12,553 people (Bali, 2016). Data from the Gianyar District Health Office in 2017 recorded the number of patients with diabetes mellitus as many as 5,656 people and in 2017 as many as 8,990 people (Bali, 2016). The results of a preliminary study at the Gianyar District Health Office had the highest number of patients recorded in the UPT Kesmas Gianyar I area, the number of patients in 2016 was 789 people who suffered from diabetes mellitus which increased in 2017 as many as 2,820 people who suffered from diabetes mellitus (Bali, 2016) (Donsu, 2014).

Diabetic patients in addition to experiencing physical disorders are also at risk for psychological disorders such as depression. Patients with diabetes mellitus experience various changes in their lives, starting from the regulation of diet, exercise, and blood sugar control that must be done throughout their lives (Federation, 2017). These sudden changes in life make diabetes mellitus patients show some negative psychological reactions including anger, feeling useless, increased anxiety, and depression. Patients who suffer from diabetes mellitus in their minds tend to find it difficult to accept the fact that they have diabetes mellitus. Sometimes patients with diabetes mellitus feel angry or depressed but it is a natural thing because the attitude of acceptance that they have suffered from diabetes mellitus is not always viewed from a positive angle by the sufferer (Mousa, Imam, & Sharaf, 2011).

The negative psychological response experienced by patients with diabetes mellitus if not treated will become prolonged stress that can lead to depression, if not treated, the body's cells become insensitive or resistant to the hormone insulin so that blood glucose levels cannot be controlled (Hermanns et al., 2015). Depression is a feeling (affective) disorder that can occur repeatedly characterized by sadness, loss of passion, disturbed appetite, feeling tired easily and usually the patient has poor concentration so that the patient's activities will be disrupted when he has experienced signs and symptoms of depression (Larijani et al., 2014).

Patients with diabetes mellitus have a higher risk and rates of depression are twice as severe as other diseases. Depression is more common in patients with chronic diseases, one of which is diabetes mellitus. Evidence that depressive symptoms present in patients with diabetes mellitus influence physical symptoms is related to glucose regulation through poorer self-care pathways (Larijani et al., 2014). Often patients with diabetes mellitus experience depression as a result of self-care management of diabetes mellitus patients being ineffective. This happens because of the lack of monitoring from the psychological aspect, especially screening for depression in patients with chronic diseases, namely diabetes mellitus (Indonesia, 2015).

Diabetes mellitus is an endocrine disease that is most often associated with depression. Diabetes mellitus can affect the balance of the monoamine system in the brain, a system that regulates the work of neurotransmitters in the brain called dopamine, serotonin and norepinephrine. This serotonin imbalance in the brain can make diabetic

patients prone to depression . Diabetes mellitus that is not managed properly will result in complications such as heart disease (cardiovascular), eye disease (diabetic retinopathy), kidney disease (diabetic nephropathy), neurological disease (diabetic neuropathy) and pregnancy complications (gestational diabetes). 1). Complications experienced by patients with diabetes mellitus and when they cannot carry out good care management will increase the chances of becoming depressed . Poor lifestyle in patients with diabetes mellitus accompanied by not knowing the complications experienced and how to handle them resulted in patients experiencing depression (Lubis, 2016).

The provision of interventions related to the handling of psychological problems in patients with diabetes mellitus will make a major contribution to the patient's self-care management (Lubis, 2016). The provision of interventions related to handling the patient's psychological problems in self-care of diabetes mellitus patients will begin by reviewing the medical history from the biological aspect followed by reviewing mental health to find out psychological problems that hinder the patient's self-care management. Assessment of mental health is very important to be recommended in patients with diabetes mellitus to determine the level of anxiety and depression because it will make it easier to provide interventions related to handling patient psychological problems (Mousa et al., 2011). Overcoming the impact of depression in patients with diabetes mellitus requires stress management efforts in patients with diabetes mellitus, one of which can be done with assertive behavior (Marathe, Gao, & Close, 2017).

The study entitled The Effect of Diabetes-Specific Cognitive Behavioral Treatment with Assertive Behavior for Patients With Diabetes and Subclinical Depression at German Diabetes Center with a number of respondents as many as 214 people obtained the results of assertive behavior treatment for depression ($p = 0.012$), from the study showed that administration of CBT therapy and Assertive Behavior is effective for treating depression in patients with diabetes mellitus (Hermanns et al., 2015). Another study with the title Evaluation of Assertiveness Training for Psychiatric Patients in Psychiatric Ward Of a Military Hospital at Taiwan with a number of 28 respondents obtained the results of assertive behavior treatment for depression ($p = 0.001$), from the study it showed that the provision of assertive behavior training was effective for overcome depression in patients with diabetes mellitus who experience psychological disorders (Lin et al., 2014).

Information obtained that there has never been a special intervention to deal with psychological problems of diabetes mellitus patients after interviews with officers at the puskesmas (Markowitz, Gonzalez, Wilkinson, & Safren, 2011). The first treatment for diabetes mellitus patients at the puskesmas is by giving sulfonyurea antidiabetic drugs, namely metformin and glibenclamide to control blood glucose, other treatments by checking blood glucose levels, and performing wound care if there are diabetes mellitus patients who experience diabetic foot. After the treatment was given, the patient was not given other interventions and had never applied the provision of assertive behavior exercises in the treatment of depression in patients with diabetes mellitus. This study aims to determine the effect of assertive behavior on depression in patients with diabetes mellitus.

RESEARCH METHOD

This study is a *pre-experimental study* with a *one-group pre-post test* design. The measuring instrument used in this study to determine the level of depression of the research subject is the *Beck Depression Inventory II* (BDI-II) which consists of 21 statements, the score will be classified into the following categories: 0-9: no symptoms of depression, 10-15: mild depression, 16-23: moderate depression, 24-63: major depression In this study the measurement of The level of depression was carried out twice, namely

before treatment and after treatment. The results are recorded in a depression level recapitulation sheet, another data collection instrument is an assertive behavior procedure sheet . This research was conducted at the puskesmas from April to May 2018, using a *purposive sampling technique* . The sample in this study used one sub - group without a control group. The data analysis technique used in this study is the *paired-sample t-test* . After going through the data collection process, there were 17 diabetes mellitus respondents who met the inclusion criteria, namely diabetes mellitus patients who were willing to become respondents, diabetes mellitus patients aged 31-60 years, and diabetes mellitus patients who experienced depression after being screened for depression.

RESULTS AND DISCUSSION

Before describing the complete research results, first describe the characteristics of the research subjects. Characteristics of research subjects include: age , gender, education, occupation and the presence or absence of complications described in the following table.

Table 1 Distribution Frequency Sub y ek Research Based on Age

| Age (Years) | F | % |
|-------------|----|------|
| 20-30 | - | - |
| 31-59 | 13 | 76.5 |
| 60 | 4 | 23.5 |
| Total | 17 | 100 |

Table 1 shows that the age of the research subjects was mostly in the age range of 31-59 years, namely 13 people (76.5 %).

Table 2 Distribution Frequency Sub y ek Research Based on Gender

| Gender | F | % |
|--------|----|------|
| Man | 11 | 64.7 |
| Woman | 6 | 35.3 |
| Total | 17 | 100 |

Table 2 shows that the gender of the research subjects were mostly male, as many as 11 people (64.7 %).

Table 3 Distribution Frequency Sub y ek Research Based on Education

| Education | f | % |
|------------------|----|------|
| No school | 2 | 11.8 |
| Basic education | 7 | 41.2 |
| Middle education | 4 | 23.5 |
| Higher education | 4 | 23.5 |
| Total | 17 | 100 |

Table 3 shows that most of the research subjects had basic education, namely 7 people (41.2 %).

Table 4 Distribution Frequency Sub y ek Job Based Research

| Work | f | % |
|--------------|----|------|
| Working | 5 | 29.4 |
| Doesn't work | 12 | 70.6 |
| Total | 17 | 100 |

Table 4 shows that most of the research subjects did not work as many as 12 people (70.6 %).

Table 5 Distribution Frequency Sub y ek Research Based on Complications

| Complications | f | % |
|--------------------|----|------|
| With Complications | 8 | 47.1 |
| No complications | 9 | 52.9 |
| Total | 17 | 100 |

Table 5 shows that most of the research subjects of diabetes mellitus without complications were 9 people (52,9 %).

After the data on the characteristics of the research subjects were described, it was continued with the results of measuring the level of depression before and after being treated with assertive behavior. The results of measuring the level of depression before and after being treated with assertive behavior can be described as follows.

Table 6 Frequency of Depression Levels Before Assertive Behavior Treatment

| Depression Level | F | % |
|---------------------------|----|------|
| No symptoms of depression | - | - |
| Mild depression | 6 | 35.3 |
| Moderate depression | 11 | 64.7 |
| Severe depression | - | - |
| Total | 17 | 100 |

Table 6 shows the level of depression in most patients with diabetes mellitus before being treated with assertive behavior was in the moderate depression category, as many as 11 people (64.7 %).

Table 7 Frequency of Depression Levels After Assertive Behavior Treatment

| Depression Level | F | % |
|---------------------------|----|------|
| No symptoms of depression | - | - |
| Mild depression | 8 | 47.1 |
| Moderate depression | 9 | 52.9 |
| Severe depression | - | - |
| Total | 17 | 100 |

Table 7 shows that the level of depression in most patients with diabetes mellitus decreased from 11 people (64.7%) to 9 people (52.9%), while the number of mild depression increased from 6 people (35.3%) to 8 people (47.1%).

The level of depression before being given treatment mostly had a moderate level of depression as many as 11 people (64.7 %). The results of this study are in accordance with the research entitled The Relationship of Depression Levels with Blood Sugar Levels in Type II Diabetes Mellitus Patients at Karanganyar Hospital with 49 research subjects. The results showed that most of the research subjects, namely 29 people (59.1 %) had moderate depression (Setyani, 2012). Another study entitled The Role of Psychological Factors on Depression in Patients with Type 2 Diabetes Mellitus at

Moyudan Health Center and Seyegan Health Center Yogyakarta Province with the number of research subjects as many as 248 people. The results showed that most of the research subjects, namely 110 people (44.4%) had moderate levels of depression (Donsu, 2014).

The results of this research show that the research subjects are mostly experiencing moderate depression due to complications experienced by patients with diabetes mellitus who are treated at the puskesmas such as *diabetic foot* , neuropathy and retinopathy requiring further treatment . The treatment given to patients with diabetes mellitus at the puskesmas is quite limited , namely the administration of sulfonylurea *antidiabetic* drugs , namely *metformin* and *glibenclamide* . to control blood glucose . Other treatments include checking blood glucose levels, and performing wound care if there are patients with diabetes mellitus who have *diabetic foot* .

This situation has not been fully able to overcome the problem of diabetes mellitus patients because there is no specific intervention to deal with psychological disorders that occur. Untreated will lead to depression in patients so that self-care management becomes poor. Major depressive disorders are associated with age, gender, complications and uncontrolled blood glucose (Larijani et al., 2014) . Patients who are diagnosed with chronic diseases such as diabetes mellitus which are difficult to cure, the patient will feel surprised then excessive anxiety, loss of self-confidence and self-esteem (*self-esteem*) to lead to depression.

The level of depression after being given treatment mostly experienced moderate depression as many as 9 people (52,9 %) experienced a decrease from the previous 11 people (64.7%). The results obtained are in accordance with previous research entitled *The Effect of Diabetes-Specific Cognitive Behavioral Treatment with Assertive Behavior for Patients With Diabetes and Subclinical Depression at German Diabetes Center* with a number of research subjects as many as 214 people. depression ($p = 0.012$), from the study showed that the administration of CBT therapy and Assertive Behavior can reduce the level of depression in diabetic patients (Hermanns et al., 2015) . Another suitable study is the result of a study entitled *Evaluation of Assertiveness Training for Psychiatric Patients in Psychiatric Ward Of a Military Hospital at Taiwan* with a total of 28 research subjects. giving assertive behavior exercises can reduce the level of depression in patients with chronic diseases such as diabetes mellitus who experience psychological disorders (Lin et al., 2014) .

The results of this study indicate that the level of depression in patients with diabetes mellitus can be decreased by practicing assertive behavior. The essence of assertive behavior is honesty, which is a way of life or a form of communication carried out by patients based on honesty to express themselves sincerely, firmly, openly, spontaneously, whether this is considered as desired so that it can reduce negative responses such as stress and depression. experienced by the patient (Lubis, 2016) .

Patients suffering from diabetes mellitus must be given intervention in the psychological field to prevent psychological disorders such as depression, one of which is by teaching assertive behavior, besides being easy to do assertive behavior can be done by anyone and at any time so as to increase self-confidence in diabetes mellitus patients in management self care. Assertive behavior is behavior in interpersonal relationships that involves expressing emotions, feelings of anxiety or tension about the problems experienced without harming themselves or others (Alberti & Emmons, 2017) .

Assertive behavior exercises have been shown to be effective in dealing with depression, anger, irritability, and interpersonal anxiety, especially when symptoms arise due to an unfair environment, with patients becoming more assertive, patients becoming

aware of the patient's right to relax, and being able to take time to relax. themselves so as to manage the patient's self-care .

showed that assertive behavior had a significant effect ($p= 0.015$) on depression in patients with diabetes mellitus. The results of this study are in accordance with the results of a previous study entitled *The Effect of Diabetes-Specific Cognitive Behavioral Treatment with Assertive Behavior for Patients With Diabetes and Subclinical Depression at German Diabetes Center* with a number of research subjects as many as 214 people. 0.012) from the study showed that the administration of CBT therapy and Assertive Behavior was proven to be effective in reducing the level of depression in patients with diabetes mellitus . Another study entitled *The Effect of Assertiveness Training Program on Assertiveness Skills and Social Interaction Anxiety of Individuals with Schizophrenia at El Maamoura Hospital, Egypt* with the number of research subjects as many as 62 people, the results of the treatment of assertive behavior towards depression ($p = 0.001$) from the study showed that there was a significant effect of assertive behavior on psychological disorders such as anxiety and depression in patients with schizophrenia who had a history of chronic diseases such as diabetes mellitus (Mousa et al., 2011).

Other related research is a study entitled *Evaluation of Assertiveness Training for Psychiatric Patients in Psychiatric Ward Of a Military Hospital in Taiwan*. with the number of research subjects as many as 28 people, the results of the treatment of assertive behavior towards depression ($p = 0.001$) from the study showed that there was a significant effect of giving assertive exercises on depression in patients with a history of chronic diseases such as diabetes mellitus (Lin et al., 2014).

Assertive behavior exercises carried out in this study can reduce the level of depression in patients with diabetes mellitus, but the average level of depression in patients with diabetes mellitus is still in the category of moderate and mild depression. Observed one by one from the results of the study, it was found that research subjects whose depression scores were still fixed and increasing, there was a fixed depression score of 1 person, namely research subject No.001, depression score increased by 2 points as many as 2 people, namely research subjects No.009 and 016, depression scores increased by 1 point by 1 person, namely research subject No.017. Based on the results of observations and interviews after being given treatment, research subjects No. 001, 009, 016, and 017 in carrying out assertive behavior exercises have not been serious in implementing them. Research subject No.001 said that after exercising assertive behavior the problems experienced such as still feeling tired quickly, anxiety about diabetes mellitus still existed this was due to the condition of the body that was still fat so it was difficult to carry out activities in self-care management. .009 and 016 said they still could not behave assertively well. The problems they experienced such as anxiety about illness still existed because of the increasing age factor, especially because of the disciplined care management such as taking medicine, they complained of feeling anxious when the medicine ran out and there was no family involved. want to accompany or deliver for control and treatment to the puskesmas, research subject No.017 said that after doing the assertive behavior exercise, he felt that he was experiencing changes in himself such as being able to maintain his diet but when he did control at the puskesmas, the patient experienced other complaints, namely toothache. I so the patient was not serious in carrying out the exercise of assertive behavior at that time.

From the results of observations and interviews, this is because there are factors that influence the onset of depression such as age, lifestyle and different mindsets of patients, besides that the time span for implementing assertive behavior exercises is very minimal. The results of this study are in accordance with previous studies that have shown a decrease in the level of depression from moderate depression to mild depression,

the depression scores obtained by research subjects do not always decrease, but there are scores that increase and remain due to the psychological condition of patients with diabetes mellitus. different (Lin et al., 2014). In addition to the different psychological conditions of patients, it can be caused by factors that influence depression such as age, and lifestyle (Oieru, Popa, & Vlad, 2014).

The provision of care for patients with chronic diseases, especially diabetes mellitus who are prone to psychological disorders such as depression, needs to be given interventions to overcome their psychological disorders so that they can increase the patient's self-confidence for self-care management. The more often the exercise of assertive behavior is carried out, the more self-confidence of diabetes mellitus patients is trained for better self-care management.

To overcome psychological disorders such as anxiety to depression faced by a person due to various problems experienced by assertive behavior can increase the ability to be honest with oneself and improve personal life to be more effective. Assertive behavior training is a systematic summary of skills, rules, concepts or attitudes that can develop and train an individual's ability to convey thoughts, feelings, and needs confidently, so the more often it is done, the better.

CONCLUSION

The level of depression in patients with diabetes mellitus before being treated with assertive behavior was mostly in the category of moderate depression as many as 11 people (64.7%). The level of depression in patients with diabetes mellitus after the treatment, the number of moderate levels of depression decreased to 9 people (52.9%). Based on the results of the *paired t-test* statistical test, it can be concluded that the *p* value = 0.015 which means that there is an influence of assertive behavior on depression in DM patients, that assertive behavior can reduce the level of depression.

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