

## ***Spiritual Mindfulness Based on Benson Relaxation in The Management of Stress Levels Reduction on Type 2 DM Patients***

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**Abstract** - Patients with diabetes mellitus have a high stress level, this is because the treatment is undertaken such as diet, blood sugar control, drug consumption, and exercise. In addition, the risk of disease complications that can be experienced by patients will also increase stress. Spiritual mindfulness based on benson relaxation affects the formation of positive cognitive (perception) responses in the brain. A good stress perception will stimulate the hypothalamus to release a series of hormones that cause modulation of the physiological barrier of the immune response by decreasing the activation of the HPA axis and increasing activation of the parasympathetic nerve through vagal stimulation. The purpose of this study was to prove the influence of spiritual mindfulness based on benson relaxation in reducing stress levels of type 2 diabetes mellitus. This study was a quasy experimental study using the pretest posttest with control group design method. Respondents in this study were 60 type 2 DM sufferers and were taken by simple random sampling technique and divided into two groups namely the intervention group and the control group. Stress level data is obtained using a questionnaire measurement tool. The intervention group was given spiritual mindfulness based on benson relaxation for four weeks. The results of data analysis using t-Test with a significance of  $p < 0.05$ . The stress level test results showed a significant difference between the intervention group and the control group with  $p$ -value = 0,000. Mindfulness spiritual intervention based on benson relaxation is effective against stress levels of people with type 2 diabetes.

**Keywords** - spiritual mindfulness based on benson relaxation, type 2 DM sufferers, stress

## **1. Introduction**

Diabetes Mellitus is a chronic metabolic disorder that is characterized by increased blood glucose (hyperglycemi), caused by an imbalance between the supply and the need to facilitate the inclusion of glucose in cells in order to be used for metabolism and cell growth. (Izzati & Nirmala, 2015). The prevalence of DM in East Java Province in 2016 is 431 thousand cases. Surabaya City has the most cases of type 2 DM in East Java province. Year 2016 in Surabaya city there are 34 thousand cases type 2 DM, the number is increased from the year 2013, as many as 18 thousand cases DM type 2 (Dinkes Kota Surabaya, 2017).

Patients with DM will experience some changes in his life such as dietary changes and lifestyle. Changes that occur in psychological sufferers such as anger, feeling useless, anxious about their health in case of complications, and ongoing anxiety will become depressed. The effects of stress can lead to increased production of epinephrine, mobilizing glucose, fatty acids, and nucleic acids that tend to cause hunger, and anxiety (Hawari, 2001). Prolonged stress leads to increased HPA axis activity resulting in increased cortisol levels accompanied by increased glucose in circulation. Cortisol also affects the function of insulin related in terms of sensitivity, production and receptors, so that blood glucose cannot be balanced (Putra, 2011)

One form of nonpharmacological intervention in lowering stress levels is the spiritual exercise of mindfulness based on Benson relaxation. Mindfulness is an exercise of self-acceptance of what is happening now, and builds self-awareness. The spiritual aspect is one aspect that can improve the individual's perception of him. Spiritual Mindfulness is a therapy that adopts the theory of nursing the Callista Roy, which focuses on the psychological with the provision of breath accompanied by the granting of motivation with the sentences of dhikr, so the awareness and acceptance of the condition. The concept Model and theory of Roy emphasized on the physical and psychic aspects so that formed adaptive behavior.

Researchers tried to prove that spiritual mindfulness based on Benson relaxation as one of the attempts to lower or stabilize the stress levels of a type 2 DM patient that elicits adaptive behaviour with the Calista Roy approach to nursing theory.

As long as the patient performs mindfulness based on Benson relaxation will be listened to voice recordings containing motivational sentences, the size and patience that will stimulate the prefrontal cortex then results in a change of self-perspective that is shaped consciousness to take wisdom against the condition of the present and

will increase the tolerance to stress and lower muscle tension, then will change the cognitive and emotional responses of individual spiritual as the adapate affects the atmosphere of the liver to relax maintaining positive emotions that are self-acceptance and increased confidence

## 2. Methodology

Research uses Quasy-Experiment research with a pre post test control group design approach with mindfulness-based spiritual therapeutic intervention on Benson relaxation. The draft uses a control group (comparator) that allows researchers to see changes in the stress levels of type 2 DM before and after therapy for mindfulness based spiritual therapy on Benson relaxation. Sampling is done on the control group and simple random sampling then the division is done according to the desired researcher (purposive sampling) i.e. 30 people for the control group and 30 people for the treatment group. The intervention and control group were given counseling on the management of DM which was then carried out stress measurement. After the second four weeks of the group post-test

This research was conducted in Surabaya Islamic Hospital A. Yani and implemented from April 2020. The research variables consist of two variables, the free variable is spiritual mindfulness based on Benson relaxation and the variables tied in this research stress level.

## 3. Result

The result of variable stress reduction patients DM Type 2 in the intervention group showed there was a significant reduction in stress levels after being given spiritual mindfulness based on Benson relaxation. Based on the statistical test with the paired test held by  $P = 0.000$  in the intervention group, there is a difference in stress levels before and after the spiritual intervention of mindfulness based on Benson relaxation. In the control group obtained  $p = 1.000$  which indicates there is no difference in the level of stress before and after being given therapy. In the statistical test with the independent pre test obtained  $p = 0.797 > \alpha 0.05$ , which means there is no difference in stress levels between the intervention group and the control group. In statistical tests with the post test indepedent obtained  $P = 0.00 > \alpha 0.05$ ,  $H_0$  rejected which means there is a difference in stress levels between intervention groups and control groups. So there is a spiritual influence of mindfulness based on Benson relaxation towards stress levels.

The results of this study are aligned with other studies indicating that mindfulness affects anxiety. Research conducted by Miichaela, et al (2017) investigating the neurological effects of mindfulness therapy, which can be concluded that mindfulness affects the symptoms of stress. Rosenszweig (2007) expressed changes in glycemic control, weight loss, blood pressure, and psychological-stress symptoms in Type 1 DM patients by providing MBSR intervention carried out for 4 weeks. While Anselm, et al (2016) states that focusing breathing when mindfulness is effective in emotional regulatory settings, decreased activation of Anigdala da enhances prefrontal integration

Mindfulness is a condition in which a person accepts the conditions that occur today. Mindfulness based on Benson relaxation exercises part of Mindfulness Based Stress Reduction (MBSR) which is the basic technique for a person achieving a conscious state of existence. In breath exercises that are focused and accompanied by a dhikr sentence, the individual will be directed to feel the sensation of breathing. The giving of mindfulness therapy leads to increased relaxation and comfort by emphasizing stressor.

Dalen (2014) mentions mindfulness meditation focuses more on concentration in addressing cognitive problems and diverts the mind to lower emotional stress. Mindfulness based on Benson Relaxation is a therapy that is effective in addressing the problem of Psykolois, because this therapy focuses on the concentration of attention that occurs today. In the mindfulness process there are several influential events, such as experince being present (experience), which from in someone can be used as a lesson. Mindfulness in this process translates a person's ability to focus on what is happening today based on previous experiences by maintaining Kesadran, acceptance and rest at any time. Awareness of one's ability to control the experience that reappears in a healthy way. Acceptence, the acceptance of what is happening without denial and refusal. Attention (attention) focuses attention on what is happening. The process of transformation, through mindfulness gained access to the inner directly to Insight, transformation and healing (White, 2014).

This intervention using Callista Roy's theory of nursing approach is that the ability of a different and individual control procces will be adjusted to the level of individual adaptation, which can be observed through

physiological adaptation of the individual's physical ability to respond to stimulus, self-concept adaptation, psychological (feeling) and spiritual ability (trust in God).

Spiritual Mindfulness based on Benson relaxation can make a person aware of his or her current condition without blaming others and the environment, by drawing closer to God with any belief that happens is the gift of God by giving motivation by listening to the voice recording that contains the Istruksi to focus the mind with the breath that is taken by the sentence of Dhikr made for 15 minutes in each implementation performed once a day before the start of the activity (Rohmawati and Setiawan, 2019). Prayer from the point of view of mental health is psychiatric therapy, at a higher level than regular psychotherapy. This is because dhikr and prayer contain a spiritual element of Keruhanian, religious, that can awaken hope and confident in the client or the sufferer, which in the spirit of immunity and psychic power increases thereby accelerating the healing process (Hawari, 2009).

During the process of mindfulness therapy is very influential in reducing levels of anxiety. When a person feels anxious then the body's system will work by increasing the sympathetic nerve work as a response to stress. The sympathetic nervous system works through the activation of the adrenal medulla to increase the production of epinephrine, norepinephrine, cortisol and lower nitric oxide. Such circumstances will cause changes in body response such as increased heart rate, breathing, blood pressure, blood flow to various organs increases as well as increased metabolism of the body. The mindfulness technique that is performed will stimulate the area of the brain i.e. the prefrontal cortex which is the center of emotional regulation and judgment to instruct the emotional reaction that then the body will respond in a way of accepting and unjudgmental feelings, while on the Hypocampus and amygdala areas besides the area to regulate emotions as well as areas of openness, blackout, and reinforcement that will provide instruction for more self-opening so that individuals are able to escape in consciousness, refraining from internal reactivity and able to improve self-acceptance

This intervention can inhibit the activity of sympathetic nerves resulting in a decline in oxygen consumption by the body and subsequent muscles of the body to be relaxed, giving rise to a feeling of calm and comfort. The relaxed feeling will be passed on to the hypothalamus to produce the Corticotropin Releasing Factor (CRF) and the Corticotropin Releasing Factor (CRF) activating the anterior pituitary to secreting enkephalin and endorphin that act as a neurotransmitter that affects the mood to be relaxed and happy. In addition, the anterior pituitary secretion of Adrenocorticotrophic hormone (ACTH) decreases, then the Adrenocorticotrophic hormone (ACTH) controls the adrenal cortex to control the secretion of cortisol. Decreasing levels of Adrenocorticotrophic hormone (ACTH) and cortisol cause anxiety, stress and decreased tension that can eventually lower the level of depression.

## 4. KESIMPULAN

There is a spiritual influence of mindfulness based on Benson relaxation against the level of stress before and after being intervened. Patients with type 2 DM are expected to assess their own ability to conduct health promotion behavior, in the form of stress management in the face of diabetes mellitus type 2 disease that they have suffered. Stress management through spiritual mindfulness based on Benson relaxation is routine, able to solve patients' problems faster and can be done on an ongoing basis. This occurs the immunity of the wonder depends on emotions or psychologically.

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