

Psychological Well-Being of Middle-Aged Diabetes Mellitus Patients at The Clinic Kusmi Ceria: One Shot Case Study

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Abstract. Diabetes mellitus is a group of diseases characterized by high blood glucose levels, caused by the body's inability to produce or use insulin effectively. This condition can have a significant psychological impact on individuals. Psychological well-being directly influences mental health and indirectly affects physical health. In people with diabetes mellitus, maintaining psychological well-being is crucial for reducing the risk of complications. This study aims to improve the psychological well-being of diabetes mellitus patients with two approaches, namely psychoeducation and positive group therapy. The research was conducted using an experimental one-shot case study method with 20 subjects who participated in the prolanis program, aged between 45-60 years. The results showed that the intervention, which included morning exercises and psychoeducation to improve psychological well-being through positive group psychotherapy techniques, significantly affected the participants. The success of each activity session—gymnastics and psychoeducation—was evident, with sessions divided into themes of pleasant life, pursuit of meaning, and engaged life.

Keywords: *Psychological well-being, diabetes mellitus, middle-aged, positive group psychotherapy*

1 Introduction

Diabetes Mellitus (DM) is a group of diseases characterized by high levels of glucose (sugar) in the blood, caused by the body's inability to produce or use insulin effectively. Insulin, a hormone produced by the pancreas, regulates blood glucose levels. If not managed properly, high blood glucose levels can lead to various health complications. Symptoms of diabetes include frequent urination, excessive thirst, unwanted weight loss, fatigue, blurred vision, and slow-healing wounds. Diabetes management includes controlling blood glucose levels through medication or insulin as per doctor's instructions, regular blood glucose monitoring, healthy eating patterns, and regular exercise.

The American Diabetes Association (ADA) and the World Health Organization (WHO) propose four clinical categories for impaired glucose tolerance: type I and II diabetes, gestational diabetes, and other specific types¹. Type II DM, also known as non-insulin-dependent or adult-onset diabetes, is prevalent, with 90% of diabetes cases falling into this category. Each year, approximately 650,000 new cases of Type II DM are reported.

Indonesia ranks fourth in the world for the highest number of diabetes mellitus (DM) sufferers. According to the Indonesian Ministry of Data and Information Center (2018), the number of diabetes sufferers in each province increased by 2-3.4% from 2013 to 2018, with a total of 8.4 million people in 2000, projected to rise to 21.3 million by 2030. Diabetes mellitus was the second most common disease in 2021, with 7,982 cases (43.51%). The Head of the Semarang City Health Service reported that the number of diabetes mellitus cases in Semarang City would reach 5,991 in 2023, primarily affecting those aged 46-65 years (3,869 non-insulin dependent and 128 insulin-dependent cases). There were also 1,528 cases among those over 65 years old (424 non-insulin dependent and 22 insulin-dependent). Adolescents aged 12-25 years reported 14 non-insulin-dependent and 5 insulin-dependent cases. The vulnerable age for diabetes mellitus starts between 45 and 64 years, considered a productive age, posing a challenge for the government and society². Middle adulthood, or middle age, spans 40 to 60 years.

Middle adulthood is characterized by a decline in physical condition, requiring various adjustments. Lifestyle and genetic factors play significant roles in determining diseases in middle adulthood. Other important factors include immune function. Stressed individuals tend to overeat, avoid exercise, and engage in other unhealthy behaviors, worsening physical conditions and triggering chronic diseases like diabetes mellitus³. Stressful situations exacerbate diabetes symptoms, making disease management difficult. Thus, reducing stress and negative emotions is crucial for diabetes sufferers³.

Diabetes mellitus significantly impacts individuals' psychological well-being. Managing a chronic health condition, changing lifestyles, and facing long-term complications can impair quality of life, leading to higher levels of anxiety and depression. Individuals with diabetes must adjust their symptoms and lifestyle behaviors because diabetes cannot be completely cured, only managed to alleviate symptoms⁴. Stress, anxiety, depression, and

¹ Price, S. A. & Wilson, L. M.: *Pathophysiology: clinical concepts of disease processes*. McGraw-Hill 1978.

² Ayu, D. U. S., & Lestari, M. D: The Role of Social Support and Self-Acceptance in Type II Diabetes Mellitus Status on Diet Compliance in Middle Adult Type II Diabetes Mellitus Patients at the Wangaya Regional General Hospital, Denpasar City. Vol 5 (2), pp. 410-423. *Udayana Psychology Journal* (2018).

³ Smith, C. A., Smyth, E. J., & Anderson, M. C: The relationship between stress management strategies and self-reflection. Vol. 78(2), pp. 222-234. *Journal of Clinical Psychology*,(2022).

⁴ Yuliasari, H., Wahyuningsih, H., & Tulisyarini, R. I: The effectiveness of religious coping training to improve psychological well-being in people with type 2 diabetes mellitus. Vol 2 (1), pp. 73-82. *Journal of Psychological Science and Profession* (2018).

hopelessness are common psychological impacts associated with Type II DM². Prolonged stress negatively affects overall health, including in individuals with Type II DM, by increasing cortisol production, which raises blood glucose levels. This can complicate diabetes management and suppress immune function, making individuals more susceptible to infections and complications. Therefore, stress management and psychological support are essential for individuals with diabetes mellitus.

Psychological well-being (PWB) is crucial for diabetes mellitus patients, directly influencing mental health and indirectly affecting physical health. Positive mental and physical health contributes to a better physical condition⁵. Maintaining psychological well-being helps reduce complications. Therefore, it is important for diabetes mellitus patients to focus on their mental health and improve their psychological well-being.

An initial assessment on April 3, 2024, through unstructured interviews with the doctor in charge at the Pratama Kusmi Ceria Clinic in Semarang, revealed that diabetes mellitus patient care is limited to physical activities (morning exercise every Friday) and regular blood sugar check-ups. However, mental health and psychological well-being are not addressed, despite their importance in managing diabetes mellitus.

Treatment of type II diabetes mellitus (DM) requires continuous monitoring and management over a long period of time and can be very challenging. This is because diabetes control requires discipline in maintaining a diet, exercising regularly, and monitoring blood sugar levels, which are often difficult for patients to do consistently. Therefore, it is important to not only focus on the physical aspects of treatment such as blood sugar control and medication use, but also to pay attention to the patient's psychological well-being⁶. Psychoeducation through positive group psychotherapy is an effective approach to improving the psychological well-being of people with diabetes. Positive group psychotherapy emphasizes building a satisfying life, engaging in meaningful activities, and gaining deep satisfaction⁷.

Psychoeducation and group psychotherapy offer a very useful approach for patients with diabetes mellitus. Psychoeducation serves to increase patients' understanding of diabetes, including how to manage it, and provides strategies for coping with everyday stress and anxiety. With clear information about treatment, diet, and blood sugar management, patients can better understand and manage their condition effectively. On the other hand, group

⁵ Mojahed, A., Fallah, M., Ganjali, A., & Heidari, Z: The role of social support and coping strategies in the prediction of psychological wellbeing in type 2 diabetic patients of Zahedan. , Vol. 8(1), pp. 281. *Bali Medical Journal* (2019).

⁶ Amna, Z., Zahara, M., Sari, K., & Sulistyani, A: Description of psychological well-being in patients suffering from chronic kidney failure (CKD) undergoing hemodialysis treatment. Vol. 15(2), pp. 323–338. *Journal of Psychology* (2022).

⁷ Musthafa, F. F.: Positive group psychotherapy to improve psychological well-being. *Procedia: Vol 6(1). Psychological Case Studies and Interventions* (2018).

psychotherapy provides important social support by allowing patients to share experiences and support each other, reducing feelings of isolation and strengthening social networks. In addition, group psychotherapy helps patients develop social skills, increase optimism, and overcome negative emotions such as anxiety and depression. The combination of these two approaches can significantly improve the quality of life of patients with diabetes mellitus by reducing anxiety, improving psychological well-being, and promoting more effective diabetes management. This approach is expected to help reduce levels of anxiety and depression and improve the overall quality of life and psychological well-being of patients with diabetes mellitus who are members of the prolanis program at the Kusmi Ceria Clinic in Semarang.

2 Method

Study design

The research employs a pre-experimental method, specifically a One-Shot Case Study. This research was conducted at the Kusmi Ceria Clinic, Semarang. Initial data collection was carried out on April 3, 2024 and the program implementation process was carried out on April 20, 2024 at 06.30 - 08.00 WIB

Participant

The study involved 20 middle-aged participants (45-60 years) from the Prolanis group at the Kusmi Ceria Clinic, Semarang.

Instruments

Data collection in this study was carried out by:

- a. Observation and interviews,
- b. Giving treatment in this case morning exercises, psychoeducation and positive group therapy.
- c. After that an open post test was carried out by means of 5 patients giving their testimony voluntarily

3 Result

The application of psychoeducation and positive group psychotherapy for diabetes mellitus patients at the Kusmi Ceria Clinic, Semarang provides several benefits. First, in psychoeducation, patients are introduced to basic information about diabetes, including the causes, impacts, and proper management methods. This psychoeducation session is carried out through the provision of materials and discussions or active sharing by resource persons and subjects. On the other hand, the researcher also briefly conveys group psychotherapy which begins with an introduction to the purpose of therapy, its process, and how to participate, creating a supportive and safe environment.

During the interaction carried out in psychoeducation, patients actively learn and discuss diabetes management, share experiences about their lives both before suffering from diabetes mellitus and during adjustments because they know they have this disease. Subjects also actively participate in asking questions about things that are not yet understood. Meanwhile, group dynamics involving sharing experiences and providing mutual support play an important role. So in group psychotherapy, patients interact with fellow members, share challenges, strategies, and get emotional support.

The process of skill development is also carried out in both approaches. Psychoeducation focuses on teaching practical skills such as stress management techniques, healthy diets, and regular blood sugar measurements. Then on the other hand, in group psychotherapy, helping patients build interpersonal and emotional skills, such as effective communication and how to deal with negative emotions, through exercises and coping techniques.

4 Discussion

Evaluation of these two methods was carried out to assess their effectiveness. The intervention program positively influenced the research subjects through the success of each activity session: exercise and psychoeducation divided into a pleasant life, pursuit of meaning, and engaged life. Various discussions among research subjects revealed the following:

Pleasant Life: The first session in positive group therapy involved educating participants on identifying three positive daily experiences. Patients reflected on the importance of living principled lives and managing stress. The patient reflected on the importance of living a principled life and managing stress. For example, the patient reflected and shared experiences in her life. In this first session, the patient reflected on a past experience when her blood sugar levels were significantly elevated. This reflection revealed that a challenging job can trigger stress that negatively impacts her lifestyle and overall health. This highlights the importance of living with clear principles and actively managing stress. To overcome these challenges, the patient also learned that maintaining a work-life balance, and

implementing stress management techniques such as meditation and exercise, are essential to maintaining health and well-being. In addition, the patient mentioned things she was grateful for in her daily life. The patient recognized the value of being able to breathe well, perform daily activities effectively, and interact with friends. This awareness highlights the importance of appreciating the simple yet fundamental aspects of life. This aligns with research by Brown et al, which found that mindfulness and self-reflection help individuals manage stress effectively⁸. Peterson et al. also found that individuals who live by principles experience less stress and higher well-being⁹. Seligman et al. supported that principled living leads to better mental health¹⁰.

Pursuit of Meaning: This session focuses on identifying and addressing negative thoughts and stressors in everyday life to maintain a healthy lifestyle. In this session, participants are encouraged to reflect on thoughts that may be interfering with their well-being and evaluate the factors that may be triggering stress. Through this reflection, participants are reminded of the importance of gratitude and how managing stress effectively can contribute to a healthy and fulfilling lifestyle. By identifying sources of stress and replacing them with positive thoughts, participants work to build more constructive thought patterns and maintain emotional balance. This helps them to better understand the impact of thoughts and stress on health and find practical ways to create a more harmonious and meaningful life. In the “Pursuing Meaning” session, a patient shares her experience in learning to identify her negative thoughts and stressors. The patient records negative thoughts and stressful situations, and notes things she is grateful for each day. She also begins to focus on enjoyable activities such as gardening, exercising, and taking yoga classes to help manage stress. Maintaining health, such as maintaining a balance between physical activity and rest, and investing time in positive social relationships, is key to feeling satisfied and happy in everyday life. By implementing these techniques, patients feel calmer and more satisfied, and are able to enjoy their retirement better. Vallacher and Wegner in a book from Snyder & Lopez explained that interpreting activities at different levels of meaning can influence individuals' experiences.¹¹ DeZutter et al. found that meaning in life is associated with optimal personal well-being and

⁸ Brown, K. W., Ryan, R. M., & Creswell, L. D: The role of mindfulness and self-reflection in stress management. Vol. 114(2), pp. 222-239. *Journal of Personality and Social Psychology* (2018).

⁹ Peterson, C., Park, J., & Seligman, M. E. P: The impact of principled living on stress and well-being. Vol. 21(2), pp. 551-564. *Journal of Happiness Studies* (2020).

¹⁰ Seligman, M. E. P., Pettit, G. S., Rawsthorne, P., & Masten, A. S: The impact of principled living on stress and mental health. Vol. 17(1), pp. 175-193. *Journal of Happiness Studies* (2016).

¹¹ Snyder, C. R., & Lopez, S. J.: *Handbook of positive psychology*. Oxford University Press. (Eds). (2002)

self-acceptance¹². Zhou and Xu supported that meaning in life mediates the relationship between self-acceptance and psychological well-being¹³.

Engaged Life: In the final session, patients were asked to make future life plans. This session aimed to help patients actively pursue their life goals, maintain their health, and foster positive relationships. Aulia found that life goals are related to psychological well-being¹⁴. Patients reflected on practicing logical leaps and making those around them happy through praise and expressions of love. Seligman in Tristiana, stated that hope and optimism form resilience against pressure¹⁵. Puig-Perez found that optimism helps individuals overcome difficult conditions due to illness and positively affects life satisfaction and well-being (Alarcon, in Gil-Almagro et al., 2024)¹⁶¹⁷. In this third session, patients shared their stories about making plans for the future, emphasizing the importance of practicing “logical leaps,” the ability to give compliments and love as part of their self-improvement efforts. Patients reflected on practicing logical leaps and making people around them happy through compliments and expressions of love. By focusing on ways to give genuine compliments and cultivate love in everyday interactions, these patients sought to improve themselves and improve the quality of their relationships with those around them. This reflected an understanding that building strong, positive relationships and showing empathy are important aspects of personal development and long-term success. Patients also felt that when they gave compliments and love, there was a certain pleasure they felt, which made them more enthusiastic about going about their day.

¹² Dezzutter, J., Casalin, S., Wachholtz, A., Luyckx, K., Hekking, J., & Vandewiele, W: Meaning in life: an important factor for the psychological well-being of chronically ill patients? Vol. 58(4), pp. 334–341. *Rehabilitation psychology* (2013).

¹³ Zhou, Y., & Xu, W: Short report: the mediator effect of meaning in life in the relationship between self-acceptance and psychological wellbeing among gastrointestinal cancer patients. Vol. 24(6), pp. 725–731. *Psychology, health & medicine* (2019).

¹⁴ Aulia, M. F., Wahyu, A. M., Anugrah, P. G., Chusniyah, T., & Hakim, G. R. U: Life purpose as a predictor of psychological well-being in generation Z. Vol. 1, No. 1, pp. 413-423. *In the National Seminar on Psychology and Humanities (SENAPIH)* (2021).

¹⁵ Tristiana, R. D., Widyawati, I., Yusuf, A., & Fitryasari, R: Psychological Well-being in Type 2 Diabetes Mellitus Patients at the Mulyorejo Community Health Center, Surabaya. Vol. 11(2), pp. 147-156. *Nurses journal* (2016).

¹⁶ Puig-Perez, S., Kozusznik, M. W., & Pulopulos, M. M: Optimism as a key factor in coping with the common cold. Vol. 37, pp. 100748. *Brain, Behavior, & Immunity-Health*, (2024).

¹⁷ Gil-Almagro, F., García-Hedra, F. J., Carmona-Monge, F. J., & Peñacoba-Puente, C: A study on optimism as a psychological strength in nurses through a prospective study from the outbreak of the COVID-19 pandemic to two years later. Vol. 38, pp. 100782. *Brain, Behavior, & Immunity-Health* (2024).

5 Conclusion

Diabetes Mellitus (DM) is characterized by high blood glucose levels due to the body's inability to produce or use insulin effectively. Psychological well-being (PWB) is crucial for diabetes mellitus patients, influencing mental and physical health. Maintaining psychological well-being helps prevent complications. The research found that a program combining morning exercise and psychoeducation with positive group psychotherapy effectively improved participants' psychological well-being. This approach highlights the importance of addressing mental health in diabetes management.

6 Limitations

This study has several limitations that need to be considered. First, the absence of pre-test and post-test scales hampers the ability to measure changes resulting from the treatment, making the assessment of the effectiveness of the treatment less accurate. Without baseline data as a point of comparison, it is difficult to determine whether the observed changes were due to the treatment or other external factors. Second, the use of a pre-experimental design with a one-shot case study reduces the internal validity of the study, as there is no control group to allow for comparison of results. This makes it difficult to determine the exact cause of the results obtained and limits the ability to generalize the findings to a wider population. Third, the limited number of subjects can reduce the representativeness and external validity of the study results, as well as increase the possibility of bias.

To address these limitations, it is recommended that future studies include pre-test and post-test scales to allow for more precise measurement of change and better evaluation of treatment effectiveness. In addition, using a more robust research design, such as a control group or randomized design, can improve internal and external validity. More in-depth statistical data collection will also provide more solid evidence of the treatment's impact. Finally, increasing the number and variety of subjects can improve the representativeness of the results and ensure that the study findings are applicable to a wider population.

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8 Conflict Of Interest

This study was conducted independently, and there are no conflicts of interest. No external entities influenced the results or interpretations of this research.

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