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The Effect of Mindfulness-Based Stress Reduction (MBSR) on Emotion Regulation among Older Adults with Type 2 Diabetes Mellitus in Bangun Rejo Village, 2025

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ABSTRACT

Emotional regulation is an important aspect in maintaining the mental health of the elderly, especially those suffering from chronic diseases such as Type 2 Diabetes Mellitus. Chronic disease conditions often trigger psychological stress that impacts an individual's ability to manage emotions. One of the non-pharmacological interventions widely developed to overcome stress is Mindfulness-Based Stress Reduction (MBSR). This study aims to determine the effect of MBSR on emotional regulation in elderly with Type 2 Diabetes Mellitus in Bangun Rejo Village in 2025. This study used a quantitative design with a one-group pretest–posttest method. The study subjects were 30 elderly with Type 2 Diabetes Mellitus selected using a total sampling technique. The MBSR intervention was given for eight sessions, and emotional regulation was measured using the Emotion Regulation Questionnaire (ERQ) before and after the intervention. Data analysis was performed using descriptive statistics and the Paired Sample t-Test. The results showed a significant increase in emotional regulation scores, from an average of 34.67 before the intervention to 75.50 after the MBSR intervention. Statistical test results showed a significant difference between pretest and posttest scores ($p < 0.05$). Thus, MBSR has been proven effective in improving emotional regulation in elderly people with Type 2 Diabetes Mellitus. The MBSR program is recommended as a supporting intervention in elderly health services.

Keywords: *Mindfulness-Based Stress Reduction; Emotional Regulation; Elderly; Type 2 Diabetes Mellitus*.

INTRODUCTION

Diabetes mellitus is a chronic disease that is common among the elderly and has a wide impact on physical, psychological, and social aspects. Increasing life expectancy has led to a growing number of elderly people with chronic diseases, including type 2 diabetes mellitus. This condition requires a comprehensive and sustainable treatment approach, focusing not only on

controlling blood glucose levels but also on the often-overlooked psychological aspects.

Elderly people with type 2 diabetes mellitus often experience psychological distress in the form of stress, anxiety, fear of complications, and changes in social and physical roles. This psychological distress can affect their ability to regulate and express emotions adaptively. Suboptimal emotional regulation can potentially decrease adherence to treatment, worsen glycemic control, and reduce quality of life.

Emotional regulation is an individual's ability to recognize, understand, and manage emotional responses that arise in various situations. In older adults, emotional regulation is significantly influenced by health conditions, social support, and coping strategies. Chronic illnesses such as diabetes can exacerbate emotional burdens, requiring adaptive strategies to manage the stress and negative emotions that arise during the course of the disease.

One psychological intervention that has been widely developed to help individuals manage stress and emotions is Mindfulness-Based Stress Reduction (MBSR). This program emphasizes practicing mindful awareness of present-moment experiences through mindfulness meditation, breathing exercises, and self-reflection. Numerous international studies have shown MBSR to be effective in reducing stress, anxiety, and depression, as well as improving psychological well-being in individuals with chronic illnesses.

The World Health Organization (WHO) also recommends a mindfulness-based approach as part of a mental health intervention that can be implemented in communities. However, the application of MBSR in the elderly population with Type 2 Diabetes Mellitus, particularly in rural communities in Indonesia, is still relatively limited and requires further study.

Based on this background, this study is important to evaluate the effectiveness of the Mindfulness-Based Stress Reduction (MBSR) program in improving emotional regulation in elderly people with Type 2 Diabetes Mellitus. The results of this study are expected to provide scientific contributions and become the basis for developing non-pharmacological interventions oriented towards improving the mental health of the elderly.

METHODOLOGY

This study used a quantitative approach with a pre-experimental design in the form of a one-group pretest–posttest design. The study was conducted in Bangun Rejo Village, Tanjung Morawa District, Deli Serdang Regency from January to April 2025.

The population in this study was all elderly people aged ≥60 years who suffered from Type 2 Diabetes Mellitus in Bangun Rejo Village, totaling 30 people. The sampling technique used total sampling, so the entire population was used as the research sample.

The intervention was a Mindfulness-Based Stress Reduction (MBSR) program, conducted over eight sessions over four weeks, twice weekly, and

lasting 60 minutes each. The intervention included mindfulness meditation, body scans, and mindful breathing exercises.

Emotion regulation was measured using the Emotion Regulation Questionnaire (ERQ), which consists of two dimensions: cognitive reappraisal and expressive suppression. Measurements were taken before (pretest) and after (posttest) the MBSR intervention. Data were analyzed using descriptive statistics and a paired sample t-test to determine differences in emotion regulation scores before and after the intervention.

RESULTS AND DISCUSSION

Changes in Emotional Regulation in the Elderly After MBSR Intervention

The results of the study showed a significant increase in emotional regulation in the elderly after participating in the Mindfulness-Based Stress Reduction (MBSR) intervention. The average emotional regulation score before the intervention was in the low category, at 34.67. After the MBSR intervention, the average emotional regulation score increased significantly to 75.50. The results of the Paired Sample t-Test showed a p value <0.05, indicating that the difference in emotional regulation scores before and after the intervention was statistically significant.

The Role of Mindfulness-Based Stress Reduction in Improving Emotional Regulation

The improvement in emotional regulation scores indicates that the MBSR program has a positive impact on older adults' emotional management skills. Through mindfulness practice, older adults become more aware of their thoughts, feelings, and bodily sensations, enabling them to respond to emotions more adaptively and less reactively. This mindfulness helps older adults reduce their tendency to suppress emotions (expressive suppression) and enhances cognitive reappraisal strategies.

Relationship of Research Findings with Previous Studies

The results of this study align with the findings of several previous studies that found mindfulness-based interventions to be effective in improving emotional regulation and reducing stress in individuals with chronic illnesses. MBSR helps individuals develop an acceptance of their condition, including the physical limitations caused by diabetes, thereby reducing the emotional burden they experience.

Implications of Emotional Regulation for Diabetes Management in the Elderly

In older adults with Type 2 Diabetes Mellitus, improving emotional regulation has significant implications. Good emotional regulation can help older adults manage disease-related stress, increase motivation for treatment, and improve adherence to medical therapy. Furthermore, the ability to manage emotions adaptively contributes to improved quality of life and overall psychological well-being.

Implementation of MBSR in Elderly Health Services in the Community

The results of this study also demonstrate that MBSR has the potential to be a non-pharmacological intervention that can be easily implemented at the community level. With a group approach and simple, self-administered exercises, MBSR can be an alternative to medical therapy for older adults with Type 2 Diabetes Mellitus.

Overall, the findings of this study strengthen empirical evidence that Mindfulness-Based Stress Reduction is an effective approach to improving emotional regulation in older adults with diabetes. Integrating MBSR into community-based health care programs for older adults is expected to provide long-term benefits for their mental health and quality of life.

CONCLUSION

Based on the research results, it can be concluded that Mindfulness-Based Stress Reduction (MBSR) has a significant effect on improving emotional regulation in elderly people with Type 2 Diabetes Mellitus. MBSR intervention is able to increase emotional awareness and emotional management skills in the elderly.

The MBSR program is recommended as a non-pharmacological intervention that can be implemented in public health services and health facilities to support the mental health of the elderly, especially those suffering from chronic diseases such as Diabetes Mellitus.

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