

PALLIATIVE CARE FOR ELDERLY PEOPLE WITH DIABETES MELLITUS IN THE COMMUNITY ENVIRONMENT: LITERATURE REVIEW

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Abstract. Diabetes mellitus is a significant health problem among the elderly, which often requires a palliative care approach. This suggests the need for a better understanding of palliative care management in a community context. The purpose of this study was to analyze palliative care journals related to diabetes mellitus in the elderly. The method used was a systematic review of relevant literature and qualitative data analysis, with secondary data analysis through various existing studies. The search was conducted through national journal databases such as Google Scholar. The results of the study showed that palliative care interventions can improve the quality of life of the elderly with diabetes mellitus, reduce symptoms, and increase social support. In addition, there is an urgent need for training of health workers in providing effective palliative care. The conclusion of this study emphasizes the importance of integrating palliative care into the management of diabetes mellitus in the elderly in the community, as well as the need to develop training programs for health workers.

Keywords: [Diabetes mellitus, quality of life, elderly, community, palliative care]

INTRODUCTION

The World Health Organization (WHO) in 2022 stated that diabetes mellitus (DM) is one of the most common diseases suffered by people worldwide and is ranked fourth in degenerative disease research priorities in all countries. WHO estimates that more than 346 million people worldwide have diabetes (Hartono & Ediyono, 2024). Diabetes mellitus (DM) is a significant global health problem. DM is a chronic condition characterized by increased blood glucose levels, which can cause various serious complications such as cardiovascular disorders, kidney damage, visual impairment, and peripheral nerve problems. The increase in the prevalence of DM is mainly caused by changes in lifestyle, unhealthy diet, and lack of physical activity (Alimurdianis et al., 2024; Budianto et al., 2022).

WHO predicts an increase in the number of DM sufferers in Indonesia from 8.4 million in 2000 to around 21.3 million in 2030. It is estimated that there are 1.5 million deaths in the world due to diabetes. This report shows an increase in the number of DM sufferers by 2-3 times in 2035. Meanwhile, the International Diabetes Federation (IDF) predicts an increase in the number of DM sufferers in Indonesia from 9.1 million in 2014 to 14.1 million in 2035 (Kusuma & Suharyanto, 2024).

In 2021, there were at least 537 million people (10.5%) aged 20-79 years in the world who suffered from DM, and there were 6.7 million people who died from diabetes at that age. This number is expected to continue to increase to reach 643 million in 2030 and 783 million in 2045. The increasing incidence of DM has resulted in Indonesia occupying 5th position in the top 10 countries with the number of adults (20-79 years) suffering from diabetes, which is 19.5 million people (Istiqomah & Yuliyani, 2022).

In Central Java province, diabetes mellitus has now reached 20.57% of sufferers. This places diabetes mellitus as the disease with the second highest number of sufferers after hypertension, which is still the main priority for controlling NCDs in Central Java. According to the results of the doctor's diagnosis, the prevalence of diabetes mellitus in residents aged ≥ 15 years in Central Java Province tends to increase by 0.5% to 2.1% in 2018 from the previous 1.6% in 2013 (Ministry of Health of the Republic of Indonesia, 2021).

Elderly people often face complex health challenges, especially related to a lack of physical activity and limited coping abilities. One of the main problems that arises is increased blood glucose. Lack of physical activity can lead to decreased insulin sensitivity, which is key in regulating blood glucose. With reduced physical fitness, the elderly body may have difficulty processing glucose efficiently, which can result in increased blood sugar levels. The inability of the elderly to cope with

stress and pressure well can also contribute to this problem. Inadequate coping can trigger the release of stress hormones, such as cortisol, which can increase blood glucose (Dwisetyo, 2024; Milita et al., 2021).

RESEARCH METHODS

This study uses a systematic review method of relevant literature or also known as secondary data analysis of literature review. The literature review method is a research method that is carried out by reviewing, collecting, and analyzing various previous research results that are relevant to the topic of family support for breast cancer patients, especially those undergoing chemotherapy. The literature reviewed includes various scientific journal articles published in the last period on a regional, provincial, and national scale, which discuss palliative care for the elderly with diabetes mellitus in the community environment.

RESULTS AND DISCUSSION

The results of the literature review search on palliative care for the elderly with diabetes mellitus in the community environment can be seen in Table 1.

Table 1. Summary Results of Literature Review

No	Title	Research methods	Research purposes	Research result
1.	Tarigan, AR et al. (2021). Implementing Palliative Care Counseling for Prevention of Diabetes Mellitus (DM) in Bagan Deli Village, Medan Belawan District.	Design: Descriptive study with community education and training approach Sample: Communities at risk or suffering from DM, health cadres, and community leaders	This study aims to increase public knowledge about risk factors, self-management, and prevention of complications of diabetes mellitus through the implementation of counseling and mentoring.	The results of this study are that the community becomes more aware of how to control blood sugar, regulate diet, and do sports activities according to conditions. This counseling is useful in preventing DM and improving the quality of life of the community, and strengthening cooperation between health workers and the community.
2.	Sari, INI & Nuraini, T. (2016). Diabetes Mellitus Patient Satisfaction With Palliative Care: Lowest Level In Physical Appearance Dimension.	Design: Cross-sectional Sample: 43 patients with diabetes mellitus	This study aimed to assess the level of satisfaction of diabetes mellitus patients with palliative care.	The results of this study are that the majority of patients were satisfied (60.5%), the physical appearance dimension received the lowest level of satisfaction; there was no significant relationship between individual characteristics and level of satisfaction; recommendations for increased attention to the physical appearance aspect in palliative care.
3.	Nurhayati, EL et al. (2022). Empowerment of Palliative Care for DM Patients.	Design: Qualitative and quantitative approaches Sample: DM patients and local communities	This study aims to improve the understanding and ability of the community and patients in carrying out palliative care for DM, as well as improving the quality of life of patients through education and management of symptoms, pain, and physical, psychosocial, and spiritual problems.	The results of this study are that after the activity, the community and patients can carry out palliative care such as mobilization, maintaining skin cleanliness, measuring blood glucose, and tube feeding. This program has succeeded in improving health, preventing complications, and empowering the community in managing chronic diseases.
4.	Dini Dwi Puspita, et al. (2023). The Effect of Yoga	Design: pre-experimental (one-group pretest-posttest design)	This study aimed to determine the effect of yoga practice on changes in	The results of the study showed that yoga practice has a major influence on changes

No	Title	Research methods	Research purposes	Research result
	Exercises on Changes in Quality of Life in Early Elderly Patients with Type 2 Diabetes Mellitus Who Participate in Prolanis Activities.	Sample: 16 respondents	quality of life in elderly people with early type 2 diabetes mellitus who participated in Prolanis activities.	in quality of life in early elderly people with type 2 diabetes mellitus who participated in Prolanis activities. The Wilcoxon signed rank test showed a p value = 0.000 ($p \leq 0.05$), which means that there is an effect of yoga practice on changes in quality of life. Of the 16 respondents who had poor quality of life before yoga practice, 13 respondents (81.3%) experienced an increase in quality of life after doing yoga practice. In addition, the measurement results showed that yoga practice has a major influence with an effect size (r) of 0.9015
5.	Hera Hastuti, et al. (2017). The Effect of Nursing Intervention "CERDIKK" on Controlling Diabetes Mellitus in the Elderly Group in Curug Village, Depok City.	Design: cross-sectional Sample: Elderly group in Curug Subdistrict	The purpose of this study was to examine the effect of CERDIKK nursing intervention on controlling diabetes mellitus in the elderly group in Curug Village.	The results of the study showed that the CERDIKK program had a significant effect on controlling diabetes mellitus in the elderly. There was an increase in supportive behavior and a decrease in blood sugar levels by 73 mg/dL after the intervention for 9 months, with the results of statistical tests showing a value of $p = 0.000$, which means significant. In addition, there was an increase in knowledge, skills, and attitudes of the elderly regarding diabetes mellitus after health education activities, with an increase of 23.3%, 27%, and 29.2% respectively, and all showed significant statistical test results ($p = 0.000$)
6.	Hera Heriyanti, et al. (2020) Family Support for Self-Care in the Elderly With Diabetes Mellitus Type 2.	Design: cross-sectional Sample: 121 respondents	The purpose of this study was to determine the effect of foot exercise on foot sensitivity and blood sugar levels in a group of elderly people with diabetes mellitus in Magelang.	The results of the study showed that there was a significant relationship between family support, especially emotional support, with self-care in elderly people with type 2 diabetes mellitus. Bivariate and multivariate analysis showed that emotional support was the most dominant variable and closely related to self-care, with an Exp (B) value = 10.875. Emotional support provided by the family can encourage the elderly to undergo regular treatment and carry out self-care well.
7.	Sona Selfia (2024). Relationship between Knowledge Level and	Design: cross-sectional Sample: 80 elderly	The purpose of this study was to analyze the relationship between the	The results of the analysis in this study showed that the level of knowledge ($p=0.011$)

No	Title	Research methods	Research purposes	Research result
	Attitude Regarding Diabetes Mellitus with Random Blood Glucose Levels (GDS) of the Elderly in the Tanggulangin Health Center Area		level of knowledge and attitudes related to DM and blood glucose levels in the elderly.	and attitudes of the elderly (p=0.008) related to DM showed a significant relationship because the p value <0.05.
8.	Leny Priyanti, Latifah Latifah, Onieqie Ayu Dhea Manto (2023). Effectiveness of Dragon Fruit Juice on Lowering Blood Sugar in Elderly Patients with Type 2 Diabetes Mellitus	Design: pre-experimental (one-group pre-test and post-test design) Sample: 15 respondents	The purpose of this study was to determine the effectiveness of giving dragon fruit juice to reduce blood sugar in elderly people with type 2 diabetes in the working area of Sungai Tabuk 2 Health Center.	The results of this study indicate that there is a significant effect of giving dragon fruit juice before and after measurement on Random Blood Sugar (GDS) in Type 2 DM patients at Sungai Tabuk 2 Health Center.
9.	Popy Irawati and Arif Firmansyah (2020). The Relationship between Family Support and Diet Compliance in Diabetes Mellitus Patients at the Cipondoh Health Center, Tangerang City.	Design: descriptive, correlational, and cross-sectional approaches Sample: As many as 96 respondents	The purpose of this study was to determine the relationship between family support and compliance with diet in diabetes mellitus patients at the Cipondoh Health Center, Tangerang City.	The results of the study showed that there was a significant relationship between family support and dietary compliance in patients with diabetes mellitus, with a p value of 0.01. Patients who received family support were 5 times more likely to comply with the diet than patients who did not receive support.
10.	Dini Dwi Puspita, Herliawati, and Fuji Rahmawati (2023). <i>The Effect of Yoga Exercises on Changes in Quality of Life in Early Elderly Patients with Type 2 Diabetes Mellitus Who Participate in Prolanis Activities.</i>	Design: Pre-experimental design method with one group pretest-posttest design Sample: As many as 16 elderly people	This study aimed to determine the effect of yoga practice on changes in quality of life in elderly people with early type 2 diabetes mellitus who participated in Prolanis activities.	The results of the study showed a significant influence between yoga practice and changes in quality of life, indicated by a p-value of 0.000 (≤ 0.05). After the intervention, 13 out of 16 respondents (81.3%) experienced an increase in quality of life. The effect size value of 0.9015 indicates that yoga practice has a major influence on improving the quality of life in early elderly people with type 2 diabetes mellitus.
11.	Ria Indriana Sukri, Sriwahyuni, and Yasir Haskas (2023). <i>The Effect of Brisk Walking Physical Exercise on Blood Pressure Changes in Women with Diabetes Mellitus.</i>	Design: quasi-experimental method with Pretest-Posttest Control Group Design Sample: 40 patients with diabetes mellitus	The purpose of this study was to determine the effect of fast walking physical exercise on changes in blood pressure in women with diabetes mellitus in the work area of the Tamalanrea Health Center, Makassar City.	The results showed that brisk walking exercise was able to reduce the average systolic blood pressure by 20 mmHg and the diastolic pressure by 3.5 mmHg. In contrast, in the control group, there was an increase in systolic blood pressure by 27.5 mmHg and diastolic pressure by 4.0 mmHg. The results of the Mann-Whitney statistical test showed a p value = 0.001 for both systolic and diastolic blood pressure, which means that there is a significant effect of brisk walking physical exercise on reducing blood pressure in women with diabetes mellitus.
12.	Anita Joelianтина, Jujuk Proboningsih, Sri	Providing counseling or education to increase	This community service activity aims to increase	The results of the study showed that cadres and

No	Title	Research methods	Research purposes	Research result
	Hardi Wuryaningsih, Irfany Nurul Hamid (2024) <i>Education on Prevention Efforts for Diabetic Foot Ulcers for Cadres and the Elderly at the Sadewo Elderly Health Post.</i>	knowledge about the application of Diabetic Self-care to prevent diabetes and diabetic foot ulcers.	knowledge about efforts to prevent diabetes and diabetic foot ulcers in a comprehensive manner.	participants of the Sadewo Elderly Posyandu in this community service activity were still at risk of experiencing hyperglycemia and UKD complications, because they had blood glucose levels of more than 200 mg/dl, had hypertension, and many were obese. It is hoped that after receiving education, participants can carry out self-care appropriately and continuously, so that optimal blood glucose levels can be achieved and complications of diabetic foot ulcers can be prevented. Education in the form of providing materials and training can improve the knowledge and skills of DM patients. This requires attention from families and health workers, especially nurses, to help patients manage their illness and prevent complications.
13.	Nina Dwi Lestari (2024) <i>Education on Independent Daily Care of Diabetic Feet for Health Cadres of the 'Aisyiyah Moyudan Yogyakarta Branch Leadership.</i>	The method of community service activities is through lectures, questions and answers, and watching videos on daily foot care independently for diabetes sufferers.	The purpose of this article is because the actions that can be taken by a health cadre related to preventing the emergence of diabetic foot wounds are including providing education and carrying out good and correct foot care for people with DM. M	The results of the study showed that community service activities in the form of education about Independent Daily Diabetic Foot Care for diabetes mellitus sufferers to the mothers of the Aisyiyah health council throughout Kapanewon Moyudan went smoothly and the participants were enthusiastic about participating in the activity from the beginning to the end of the activity because it was an interesting topic that had never been obtained. The results of this activity showed an increase in participant knowledge after participating in the activity, as seen from the results of the post-test of all participants. However, in this activity, participants have not directly practiced how to care for diabetic feet due to the limited time for implementing the activity. It is hoped that, for the development of this activity, participants will directly practice how to care for diabetic feet daily.
14.	Iggriane Puspita Dewi et al. (2023) <i>PROLANIS Psycho-Spiritual Support through Spiritual Emotional Freedom</i>	Research Design: Pre-post design (before-after intervention). Sample : 19 PROLANIS Diabetes	The study aimed to determine the effectiveness of the Spiritual Emotional Freedom Technique (SEFT) intervention as psycho-spiritual support in reducing	The results showed a decrease in anxiety levels: before the intervention, 36% of participants experienced severe anxiety, 32% moderate, and 32% mild. After the SEFT

No	Title	Research methods	Research purposes	Research result
	<i>Technique (SEFT) in Diabetes Mellitus Sufferers Group.</i>	Mellitus participants at Kujangsari Health Center, Bandung City, mostly elderly women with a history of DM 0-10 years and PROLANIS participation 0-10 years	anxiety levels in Diabetes Mellitus patients participating in PROLANIS.	intervention, 74% became mildly anxious, 26% moderately anxious, and there was no longer severe anxiety. Participants also reported that SEFT helped manage anxiety, although a small number still experienced moderate anxiety due to negative thoughts about their illness.
15.	Pahriyani, Sulistaningsih, & Siregar (2023) <i>Self-management assistance for diabetes and hypertension for the elderly through education and games.</i>	Research Design: Community service with the Asset Based Communities Development (ABCD) approach. Sample: Elderly members of Muhammadiyah Senior Care (MSC) at Jakarta Islamic Hospital, Sukapura, North Jakarta.	The aim of the research is to provide knowledge and understanding to the elderly about self-management of diabetes and hypertension through education and games, so that they are able to improve their quality of life and health even though they suffer from degenerative diseases.	The results of the study showed that after the intervention, 52% of participants had a good knowledge category, 32% a sufficient category, and 16% a poor category regarding self-management of diabetes and hypertension.
16.	Candra Nur, Hasrul, and Muhammad Tahir (2021) <i>Effectiveness of Gymnastics on Foot Sensitivity in Type 2 Diabetes Mellitus Patients in the Working Area of Pangkajene Health Center, Sidenreng Rappang Regency.</i>	Research Design: Community service with diabetic foot exercise intervention. Sample: 15 patients with type II diabetes mellitus in the working area of Pangkajene Health Center, Sidenreng Rappang Regency.	This study aimed to determine the effectiveness of foot exercises on foot sensitivity in patients with type II diabetes mellitus.	The results showed that the average foot sensitivity before the intervention (pretest) was 1.40 (scale 0-3), and after the intervention (posttest), it increased to 2.87. Foot exercises are effective in increasing foot sensitivity, reducing neuropathy complaints such as tingling and numbness, and increasing calf and thigh muscle strength.

Diabetes Mellitus is currently one of the health problems in society. Diabetes mellitus is a chronic disease caused by abnormalities in the insulin hormone, the insulin process, or both. So that the body can experience disorders in the metabolism of carbohydrates, proteins, and fats, which can have an impact on increasing blood glucose levels. Diabetes Mellitus increases every year, which happens because of the increasing population, low knowledge in managing a healthy lifestyle, obesity, and lack of physical activity. In addition, this disease is caused by an unhealthy lifestyle and also a person's inability to manage their disease independently. This is also the cause of Diabetes (Irawan & Adisty Handayani, 2022).

Palliative Care is Palliative care is a form of effort to improve the quality of life of adult patients, children, and families who suffer from life-threatening diseases, finding and treating pain and physical, psychosocial, and spiritual problems. This care reduces and prevents suffering by finding and treating pain and physical, psychosocial, and spiritual problems (World Health Organization, 2023).

The results of the literature review analyzed in this journal reveal that palliative care makes an important contribution to improving the quality of life of the elderly with diabetes mellitus. This care does not only focus on physical aspects, but also includes psychological, social, and spiritual dimensions. Research related to palliative care in the elderly with diabetes mellitus shows that educational interventions and community empowerment play a significant role in improving the quality of life of patients.

Research studies conducted by Tarigan et al. (2021) showed that palliative care counseling can improve public understanding in preventing diabetes complications. This activity also strengthens collaboration between health workers and the community. Further research by Nurhayati et al. (2022) emphasized the importance of empowering the community and patients in carrying out independent palliative care, such as maintaining skin cleanliness and monitoring glucose levels. This approach is effective in preventing complications and increasing patient independence.

Finally, research by Dewi et al. (2023) added a psycho-spiritual dimension to palliative care through the SEFT (Spiritual Emotional Freedom Technique) technique, which has been shown to reduce anxiety levels in people with diabetes. This confirms that effective palliative care must involve the psychological and spiritual aspects of the patient. The results showed a decrease in anxiety levels: before the intervention, 36% of participants experienced severe anxiety, 32% moderate, and 32% mild. After the SEFT therapy intervention, 74% became mildly anxious, 26% moderately anxious, and there was no longer severe anxiety. Participants also reported that SEFT therapy helped manage anxiety, although a small number still experienced moderate anxiety due to thoughts.

From these findings, it can be concluded that comprehensive and community-based palliative care can improve the quality of life of the elderly with diabetes mellitus. This approach is very important, especially in the context of society, where family involvement, health cadres, and ongoing education play a major role.

CONCLUSION

Based on the results of the analysis of various literature, it can be concluded that palliative care has been proven to provide a significant contribution in improving the quality of life of elderly people with diabetes mellitus. This approach not only focuses on physical aspects, but also includes the psychological, social, and spiritual dimensions of patients. Various studies have shown that educational interventions, community empowerment, and psycho-spiritual techniques such as SEFT therapy are effective in preventing complications, increasing patient independence, and reducing anxiety levels. Therefore, the implementation of comprehensive and community-based palliative care, involving families, health workers, and ongoing education, is very important to improve the quality of life of elderly people with diabetes mellitus.

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