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Family Caregiver Skill in Diabetes Mellitus Patients

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ABSTRACT

Background: Family members as caregivers must be able to provide good and proper care for patients with Diabetes Mellitus, but not all families have the skills to care for family members suffering from diabetes mellitus. Families have not been able to support diabetes management specifically for several components of diabetes mellitus management, even showing helplessness in managing and mastering adaptive tasks related to family health problems. Objective: This study aims to determine the description of family caregiver skills in caring for patients with diabetes mellitus. Method: The design used is descriptive with a cross-sectional approach and sampling using a multistage random sampling technique. The number of samples in this study was 373 family caregivers who care for diabetes mellitus patients with data collection using a questionnaire. Results: This study shows that most family caregivers with diabetes mellitus patients have moderate skills 211 (56.6%), family caregivers who have low skills 94 (25.2%), and those who have high skills 68 (18.2%). Conclusion: The skills possessed by family caregivers who care for patients with diabetes mellitus are included in the moderate skill category, it is necessary to increase knowledge of the skills that must be possessed by caregivers so that the care provided is maximized.

Keywords: Family Caregivers, Caregiver Burden, Diabetes Mellitus, Skill

INTRODUCTION

The role of family caregivers is multidimensional, with many tasks and skills required to support patient self-care as well as the health of family caregivers. [1]. The family caregiver has not been able to support the management of diabetes mellitus specifically regarding several components of diabetes management, and even shows helplessness in managing and mastering adaptive tasks related to family health issues.[2]. Informal caregivers play a crucial role in the management of chronic patients at home. Several researchers have studied the role of caregivers related to various chronic diseases and how caregiver skills can help improve the quality of life for both patients and caregivers, as well as the outcomes achieved by patients.[3].

The International Diabetes Federation (IDF) predicts that the

prevalence of diabetes is expected to increase with the aging population. The incidence is projected to rise to 578 million by 2030 and 700 million by 2045. [4]. Pada tingkat dunia Indonesia berada pada urutan ke 7 dari 10 negara dengan jumlah penderita diabetes mellitus terbanyak yaitu sebesar 10,7 juta. Indonesia merupakan negara satu-satunya di Asia Tenggara yang diperkirakan berkontribusi Indonesia terhadap prevalensi diabetes mellitus di Asia Tenggara. Di wilayah Asia Tenggara, Indonesia menempati urutan ke 3, dengan prevalensi sebesar 11,3%.

The family's contribution to caring for a family member greatly supports those suffering from diabetes. The results of a study on 10 families providing care to their family members suffering from diabetes mellitus show that 70% of families only meet some of the needs, and 80% are unable to carry out therapeutic actions

correctly. Family caregivers often face issues related to managing illnesses that can lead to physical disturbances, as well as psychological, social, and economic burdens that impact their ability to perform health-related tasks. [5]. Previous research in several Southeast Asian countries shows that the majority of families fail to manage diabetes independently [6].

Previous research results indicate that family caregivers' self-management skills are categorized as adequate (48.18%), while only 5% of family caregivers can manage diabetes independently in impoverished communities. [7]. The next research was conducted by Rondhianto et al. [8] It shows that the majority of family caregivers generally have a high level of self-management skills (72.40%), however, there are still 27.60% who fall into the moderate category. When looking specifically at the component of foot care skills, most family caregivers have foot care abilities that fall into the low category (64.60%). This indicates that not all family caregivers have good skills in managing diabetes self-care.

The family's inability to manage itself will affect the patient's self-care ability and impact their health status, increasing the risk of complications [9]. Another impact that may arise is an increase in hospitalizations and healthcare costs, a decline in quality of life, a reduction in life expectancy, and an increase in mortality due to diabetes. [8].

The caregiver family as providers of care must be able to carry out their caregiving duties properly and correctly in the management of Diabetes Mellitus, family involvement, and be skilled in diabetes care. The caregiver family plays a role as coordinators by managing the diabetes mellitus diet and medication management, as well as ensuring adherence to dietary patterns. The caregiver's family also acts as a motivator in physical exercise and blood sugar monitoring, while the family serves as

passive overseers by detecting early signs of complications. [2]. Family members are the primary source of instrumental and emotional support. The management of diabetes is crucial considering the various impacts caused by the complications of diabetes mellitus, which worsen the condition of those affected. Some interventions that can be provided include offering emotional support, enhancing family involvement, increasing family normalization, and empowering families. (family empowerment). This study uses the family-centered empowerment model, which includes problem identification, identification of family competencies or abilities, collaboration between families and clients, enhancement of family knowledge, and evaluation of outcomes [10].

RESEARCH METHOD

This research aims to analyze the caregivers' abilities in caring for clients with diabetes mellitus. This study employs a descriptive design to illustrate the caregivers' capabilities in caring for their family members with diabetes mellitus. The approach is conducted cross-sectionally, emphasizing that the measurement or observation is carried out at a single point in time. The total population of diabetes patients undergoing treatment in the Surabaya Health Center in 2022 was 96,731 individuals. The research subjects were determined based on the criteria of diabetes mellitus patients living in the same household with family members, having undergone examinations at the Health Center, and having suffered from the condition for more than one year. The sample size is calculated using the Lemeshow formula to determine the sample size, with a significance level or error rate of 0.05 or 5% and a confidence level of 95%. Therefore, the sample size for this study is 373 respondents.

Sampling with probability sampling. The sampling technique used is multi-stage sampling, specifically randomly selected,

by choosing 2 community health centers (Puskesmas) in each area of Surabaya, namely West Surabaya, Central Surabaya, East Surabaya, South Surabaya, and East Surabaya, resulting in a total of 10 community health centers. Ten community health centers. The respondent data comes from each of the health centers. The variable of this research is the caregiver's ability in the care of clients with diabetes mellitus. The instrument used is adopted from the Diabetes Management Self-Efficacy Scale [11].

RESULT AND DISCUSSION

Table 1. General Characteristic Caregiver (n=373).

Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	165	44.2
	Female	208	55.8
	Total	373	100
Religion	Muslim	365	97.9
	Catholic	3	0.8
	Christian	5	1.3
	Total	373	100
Ethnic	Javanese	311	83.4
	Chinese	2	0.5
	Madurese	57	15.3
	Other	3	0.8
	Total	373	100
Education	Elementary School	32	8.6
	Middle School	53	14.2
	High School	231	61.9
	Diploma	3	0.8
	Bachelor or Above	54	14.5
	Total	373	100
How long to take care	1 - 5 years	236	63.3
	6 - 10 years	92	24.7
	11 - 15 years	28	7.5

Variable	Category	Frequency (f)	Percentage (%)
	16 - 20 years	8	2.1
	> 20 years	9	2.4
	Total	373	100
Marital Status	Unmarried	38	10.2
	Married	330	88.5
	Divorced/widow(er)	5	1.3
	Total	373	100
Relationship with Patients	Husband/Wife	174	46.6
	Parents (Father/Mother)	3	0.8
	Siblings (Younger Sibling/Grandchild/In-law)	39	10.5
	Biological Children	157	42.1
	Total	373	100

The data presented above shows that more than half of the caregivers are female, with a total of 208 people (55.8%), compared to males with 165 people (44.2%). In terms of religion, almost all respondents are Muslim with a total of 365 people (97.9%), while a small number are Christian and Catholic. In terms of ethnicity, the majority are Javanese with a total of 311 people (83.4%), followed by Madurese with 57 people (15.3%), a small number of Chinese, and others. The level of education shows that most of them have a high school education with a total of 231 people (61.9%). Other levels of education are elementary school (32 people or 8.6%), middle school (53 people or 14.2%), diploma (3 people or 0.8%), and bachelor or above (54 people or 14.5%). Most of the population involved in caring, namely 63.3%, have done so for 1 to 5 years, with a total of 236 people. In the period of 6 to 10 years, the number decreased to 92 people, which covered 24.7% of the total

popu-lation, and decreased further in the period of > 11 years. Marital status shows that almost all caregivers are married, which is 330 people (88.5%). While those who are not married are 38 people (10.2%) and widows/widowers are 5 people (1.3%). In relationships with diabetes sufferers, almost half are husbands/wives as many as 174 people (46.6%) and biological children as many as 157 people (42.1%), a small num-ber of others who care for siblings (sisters/brothers/grandchildren/sons-in-law) and parents.

Table 2. Skills of a caregiver in caring for patients with Diabetes Mellitus (n=373)

Variabl e	Categor y	frequenc y (f)	Percenta ge (%)
Caregiv er Skills	Low	94	25,2
	Medium	211	56,6
	High	68	18,3
	Total	373	100

More than half of the caregivers, which is 211 people (56.6%), have moderate caregiving skills, 94 people (25.2%) have low skills, and 68 people (18.2%) have high skills.

Characteristics of a Caregiver

In this study, the majority of caregivers involved are female more than male. This aligns with findings that indicate women tend to be more dominant in caregiving roles because they are perceived as more empathetic and patient in providing long-term care. Gender can influence the approaches and care strategies used by caregivers, where women are more likely to adopt a holistic and emotional approach. In addition, the patriarchal culture in Indonesian society also encourages women to take greater responsibility for the care of sick family members. Therefore, understanding the role of gender in caregiving is crucial for enhancing appropriate support and training for female caregivers. Previous research has mentioned that special support for female caregivers can enhance the quality of care provided [12].

The majority of caregivers in this study are Muslim, followed by Christians and Catholics. Religious values play an important role in providing moral and emotional support for caregivers, who often face significant challenges in caring for diabetes mellitus patients. Religion can provide inner peace and additional motivation for caregivers to continue delivering optimal care. Studies show that religious beliefs can enhance caregivers' adherence to care routines and strengthen their relationships with patients. Therefore, the integration of religious values in caregiver training pro-grams can provide significant benefits. This research also supports the importance of spiritual support as an integral component in caregiving strategies[13].

In terms of ethnicity, the majority of caregivers are Javanese, followed by Madurese, Chinese, and other ethnic groups. The Javanese culture, which upholds the values of mutual assistance and kinship, greatly influences the role of caregivers in patient care. These cultural values can enhance solidarity and cooperation within families, ultimately positively impacting the quality of care provided. In addition, understanding local customs and traditions can help caregivers design more effective care strategies that are appropriate to the patient's cultural context. Therefore, care-giver training programs need to consider cultural aspects to enhance the effectiveness of care[14]. Studies show that a culturally sensitive approach can enhance patient satisfaction and care outcomes.

The education level of caregivers is also an important factor that influences their caregiving abilities. Most caregivers have a high school, followed by middle school, bachelor's degree or above. Higher levels of education tend to be associated with better abilities to understand and apply complex medical care instructions. Caregivers with higher education are more capable of accessing and utilizing information resources to enhance the quality of

their care. Furthermore, caregivers are also more likely to keep up with the latest developments in diabetes management, which is crucial for effective care. Therefore, improving access to education and training for caregivers is highly recommended to enhance caregiving skills. Other studies also emphasize the importance of formal education in enhancing the competencies of caregivers[15].

The duration of caring for family members suffering from diabetes mellitus is within 1-5 years. In long-standing diabetes mellitus, suffering can lead to various problems. The longer someone experiences diabetes, the greater the risk of complications. One of the complications that can arise is a diabetic foot ulcer, which is the final manifestation of abnormalities caused by peripheral neuropathy, vascular disorders (Peripheral Arterial Disease), or a combination of both[16].

The majority of caregivers in this study are married, followed by unmarried and widows/widowers. Marital status can affect the social support received by caregivers, where married partners tend to have better support from their spouses in fulfilling caregiving roles. This support can take the form of assistance with daily tasks, emotional support, and even financial aid, all of which can alleviate the burden on caregivers. In addition, married couples can share caregiving responsibilities, thereby reducing the stress and fatigue often experienced by caregivers. Therefore, interventions that involve partners or other family members in caregiver training can enhance the effectiveness of care. Research shows that strong family support can enhance the psychological and physical well-being of caregivers[17].

The caregiver has a close relationship with the patient, being a spouse and a biological child. A strong emotional connection with the patient can enhance dedication and commitment to caregiving. Caregivers who have a strong emotional bond with their patients tend to be more

motivated to provide the best care. In addition, they are also more likely to understand the needs and preferences of patients, which can enhance the quality of care. Studies show that a strong emotional bond between caregivers and patients can enhance patient satisfaction and reduce stress levels in caregivers. Therefore, interventions that strengthen the emotional connection between caregivers and patients can provide significant benefits. Research also shows that emotional support from close family members is very important in the management of diabetes mellitus[18].

Caregiver Skills

This research analyzes the importance of assessing the caregiver's ability to care for clients with diabetes mellitus, a chronic condition that requires special attention. Based on the research results on caregiver skills, it was found that many caregivers still have abilities ranging from low to moderate in providing care for clients with diabetes mellitus. When related to the characteristics of caregivers, 63.3% have been caring for family members suffering from diabetes mellitus for 1-5 years. A person can be said to have the ability to care if they receive various good information, training, or acquire knowledge through literacy.

The caregiver's ability to care for family members is not yet optimal, falling into the good and moderate categories, which may be due to the caregiver's lack of understanding of diabetes mellitus issues, including its management. This is supported by results showing that the duration of caring for family members with diabetes is still largely within the range of 1-5 years, indicating that caregivers have minimal experience in managing diabetes mellitus, such as diet, medication adherence, blood sugar monitoring, exercise, and other care practices like diabetic foot care. One of the factors influencing an individual's understanding comes from experience. Where experience is a process of forming information that is

not consciously recognized[19]. Long-suffering will cause the family to be able to identify problems and recognize the disease of Diabetes Mellitus.

From the perspective of caregivers' ability to provide care, many families still do not offer the quantity and types of food under the diet recommended by health professionals. and still do not know how to care for the feet of diabetic patients and do not know what types of exercise can stabilize blood sugar levels. In line with Katsarou et al. (2017), which explains that diabetes is a lifelong disease that requires supervision and monitoring from family members[20]. Caregivers play a crucial role in addressing the health issues of all family members, which means that caregivers must actively participate in the care process by enhancing their ability to care for their family members.

If related to family relationships, those who care for family members suffering from diabetes are typically spouses or children, who have a close bond, regardless of their ability to provide better care for diabetes sufferers. The family plays a key role in managing diabetes. Family members can actively support and care for patients with diabetes[21]. Supportive behavior demonstrated by families through family involvement can help reduce the likelihood of disease complications by intervening in critical situations[22]. Families that provide care to their members suffering from diabetes express that they do not feel burdened when carrying out their duties as caregivers because they consider caring for one another to be a family obligation[23]

CONCLUSION

Overall, these data show that the majority of respondents in this study have moderate caregiver skills. Caregiver Skills Possessed by respondents A total of 211 people (56.6%) had moderate caregiver skills, 94 people (25.2%) had low skills, and 68 people (18.2%) had high skills.

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