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The Relationship Between Family Support and Diet Compliance in Diabetes Mellitus Patients in the Mawar Room, Dr. Harjono S. Hospital Ponorogo Regency

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Abstract. Diabetes mellitus is a chronic disease that requires long-term management, especially in terms of adherence to dietary patterns. Family support is one of the important factors that can affect patient compliance in carrying out the recommended diet. This study aims to determine the relationship between family support and dietary compliance in patients with diabetes mellitus in the Mawar Room of Dr. Harjono S. Ponorogo Hospital. This study used a quantitative approach with a cross sectional correlation design. The sample taken amounted to 30 respondents selected by total sampling technique. Data collection was carried out using a family support questionnaire and a diet adherence questionnaire. Data analysis was performed using the Spearman Rank test. The results showed that the majority of patients received good family support (66.7%) and had an obedient level of dietary compliance (70%). The Spearman Rank correlation test showed a significant relationship between family support and dietary adherence in patients with diabetes mellitus, with a correlation coefficient of r=0.636 and a significant value of p-value = 0.001 (p<0.05).

Keywords: Diabetes Mellitus; Dietary Compliance; Family Support; Nursing Care; Patient Adherence.

1. INTRODUCTION

Diabetes Mellitus (DM) is a chronic metabolic disease characterized by hyperglycemia due to impaired insulin secretion or function. Its prevalence continues to increase globally. The WHO (2023) reports that more than 422 million people worldwide suffer from DM, and this figure is expected to reach 783 million by 2045. In Indonesia, the prevalence of DM among people aged ≥15 years reaches 11.7% (Ministry of Health of the Republic of Indonesia, 2023), with East Java as the province with a prevalence of 2.6% and Surabaya City reporting 14,377 cases per year (Hartanto & Aini, 2023). DM consists of two main types: type 1 DM (autoimmune) and type 2 DM (due to an unhealthy lifestyle). DM is often called the "Silent Killer" and "Mother Disease" because of its slow, fatal nature and the potential to cause various complications, such as heart disease, stroke, and kidney failure (Susi Susanti et al., 2022).

Diabetes management requires long-term therapy, including dietary adjustments or a diabetes diet. The 3Js (amount, type, schedule) principle forms the basis of diet therapy to control blood glucose levels. However, the success of this management is greatly influenced by patient adherence to the prescribed diet. Various factors influence patient adherence, both internal (such as boredom, psychological conditions) and external (family support). Family support has been shown to play a crucial role in helping patients adhere to treatment and diet, through emotional, informational, and physical support (Niluh Nila Savitri et al., 2022). Initial survey results at Dr. Harjono Ponorogo Regional General Hospital showed that most diabetes

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patients who received family support tended to be more compliant with their diets than those who did not. This demonstrates the importance of the family's role in supporting diabetes mellitus patients' dietary compliance.

2. THEORETICAL STUDY

Several previous studies have examined the relationship between family support and dietary compliance in DM patients.One relevant study is by Bangun et al. (2020), which examined the relationship between family support and dietary adherence in people with type 2 diabetes mellitus using a quantitative approach. This study found that 56.3% of respondents followed the diet program well, and 47.9% had adequate family support. Using a Chi-square test, the study concluded a significant relationship between family support and dietary adherence ($p = 0.038$). The focus of this study is similar to the author's study, namely, both examined adherence to dietary patterns. The differences lie in the location and timing of the study.

Another study by Tampubolon et al. (2023) also showed supportive results, with the majority of family support being in the good category (81.5%), and most respondents demonstrating a high level of dietary adherence. This study, conducted at Santa Elisabeth Hospital in Medan, used a quantitative approach and also found a significant relationship between family support and dietary adherence ($p = 0.038$). The study's theme is similar to this study, highlighting the importance of family support in implementing dietary patterns in diabetes mellitus patients, but with differences in location and year of study.

These two studies strengthen the theoretical basis of this study, which states that family support is a crucial factor influencing patients' success in adhering to the recommended diet. The results of previous research provided an important foundation for designing the instruments and analytical approach in this study.

3. RESEARCH METHODS

This study uses a quantitative research method. The research design used by the researcher in the study is correlation, namely a study that seeks how and why health phenomena can occur, using a cross-sectional approach. This design is used to see the relationship between family support and dietary compliance in diabetes mellitus patients at Dr. Harjono S. Regional General Hospital, Ponorogo Regency. The sample used by the researcher uses inclusion and exclusion criteria. The data collection technique used is a questionnaire that has been tested for

cross-tabulation with the results of p-value <α (0.05) stating that there is a relationship between the two variables.

4. RESULTS AND DISCUSSION

General Data

Table 1. General Data Frequency.

Characteristics	Category	Amount	Percentage (%)
Gender	Woman	20	66.7
	Man	10	33.3
Age (In Years)	Young Adults (15-39)	10	33.3
	Middle Adulthood (40-59)	12	40
	Late Adulthood (> 60)	8	26.7
Work	Housewife	7	23.3
	Government employees	5	16.7
	Trader	6	20
	Farmer	6	20
	Other	6	20
Long-term DM Suffering	1 year	8	26.7
	>1 year	8	26.7
	>5 years	8	26.7
	>10 years	6	20
Marital status	Not married yet	14	46.7
	Marry	16	53.3
Education	Didn't finish elementary school	4	13.3
	Elementary School	6	20
	JUNIOR HIGH SCHOOL	7	23.3
	SENIOR HIGH SCHOOL	7	23.3
	College	6	20

Source: Primary Data (2025).

This study involved 30 respondents with diabetes mellitus in the Rose Room of Dr. Harjono S. Ponorogo Regional General Hospital. The majority of respondents were female (66.7%), and the remainder were male (33.3%). Based on age, the majority were in the middle adulthood group (40–59 years) (40%), followed by young adults (33.3%) and late adulthood (26.7%).

In terms of occupation, the majority of respondents were housewives (23.3%), followed by traders, farmers, and other occupations (20% each), and civil servants (16.7%). The duration of diabetes was evenly distributed, with 26.7% having had diabetes for 1 year, >1 year, and >5 years, respectively, and 20% having had diabetes for >10 years. Most respondents were married (53.3%), while others were single (46.7%). In terms of education, the majority had junior high school and high school education (23.3% each), followed by elementary school and college (20% each), and those who had not completed elementary school (13.3%). These characteristics indicate the diversity of respondents' backgrounds, which may influence dietary adherence and the importance of family support in managing diabetes mellitus.

Special Data

Identification of Family Support for Diabetes Mellitus Patients in Following the Diet Pattern Recommended by Nurses in the Rose Room of Dr. Harjono S. Regional General Hospital, Ponorogo Regency

Table 2. Frequency of Family Support.

Category	Amount	Presentation
Bad	10	33.3%
Good	20	66.7%
TOTAL	30	100%

Source: Primary Data (2025).

Based on the table above, it is known that the majority of respondents, namely 20 respondents (66.7%), received good family support, while 10 respondents (33.3%) received poor family support. Family support for diabetes mellitus patients covers four main dimensions: emotional, informational, appraisal, and instrumental. One factor that influences the quality of this support is the employment status of both the patient and their family members. The results of the study showed that the majority of patients were housewives or unemployed, which makes them highly dependent on family support, especially for food procurement and access to health services. Families with permanent jobs and stable incomes tend to be able to provide better instrumental and emotional support. Conversely, jobs with long working hours or unstable incomes can limit the intensity and consistency of support provided.

Thus, a family's employment level and economic stability are highly correlated with the quality of family support and patient adherence to the diet. Family education should be a focus of nursing interventions to ensure holistic and sustainable disease management.

Identification of Diet Compliance of Diabetes Mellitus Patients in the Rose Room of Dr. Harjono S. Regional Hospital, Ponorogo Regency

a. Diet Compliance Before Treatment

Table 3. Frequency of Diet Compliance Before Treatment.

Category	Amount	Presentation
Not obey	9	30%
Obedient	21	70%
TOTAL	30	100%

Source: Primary Data (2025).

The results above show that 21 respondents (70%) were compliant, meaning the majority of patients had followed the recommended diet before being admitted to the hospital. However, there was still a group of patients who were non-compliant, amounting to 9 respondents (30%). This requires special attention to ensure they understand and consistently follow a healthy diet.

Most respondents in this study had secondary education (junior high school and high school), which influenced their understanding of the importance of dietary management. However, family involvement in providing information and emotional support has been shown to increase patient motivation and awareness. Widiastuti (2020) emphasized that dietary adherence is a crucial aspect of diabetes management, as a controlled diet can maintain stable blood glucose levels and prevent complications. Understanding, motivation, social support, and personal experience are key determinants in developing adherence behavior.

This research also aligns with Wahyuni (2020), who stated that education from healthcare professionals and active family support can improve dietary adherence. These findings demonstrate the importance of comprehensive educational interventions in diabetes management.

Although dietary compliance among patients prior to admission was considered good, 30% still remained non-compliant, putting them at risk of complications. Therefore, ongoing interventions involving education, family support, and comprehensive monitoring by healthcare professionals are necessary to achieve optimal diabetes control.

b. Diet Compliance During Hospitalization

Table 4. Frequency of Diet Compliance Before Treatment.

Category	Amount	Presentation
Not obey	12	40%
Obedient	18	60%
TOTAL	30	100%

Source: Primary Data (2025).

Based on the table above, 18 respondents (60%) were found to be compliant with their diet during their hospitalization, while 12 respondents (40%) were categorized as non-compliant. This indicates that even though patients are under medical supervision in the hospital, a significant proportion (40%) are still non-compliant with their dietary guidelines.

The duration of diabetes mellitus (DM) affects dietary compliance. Patients who have had it for ≥5 years tend to be more compliant due to repeated experience and education, consistent with the findings of Kumala (2018) and Aini et al. (2024). Conversely, patients with a duration of less than 1 year are still in the adjustment phase. Even in the hospital, compliance is not optimal, with 40% of patients still non-compliant. This indicates the need for more personalized educational strategies, intensive therapeutic communication, and family involvement to improve compliance and prevent complications.

Analysis of the Relationship between Family Support and Dietary Compliance in Diabetes Mellitus Patients in the Rose Room of Dr. Harjono S. Regional General Hospital, Ponorogo Regency

Table 5. Cross Tabulation of Family Support with Diet Compliance.

Family Support	Diet Compliance				Total	
	Not obey		Obedient			
	n	%	n	%	n	%
Bad	8	26.7	2	6.7	10	33.3
Good	3	10%	17	56.7	20	66.7
Total	11	36.7	19	63.3	30	100
α = 0.05; n=30						
p-value 0.001						

Source: Primary Data (2025).

Based on the results above, of the total 30 respondents, 10 people (33.3%) were recorded as having poor family support, while 20 people (66.7%) received good family support. In the group that received poor family support, the majority, namely 8 people (26.7%) did not adhere to the diet, and only 2 people (6.7%) were compliant. Conversely, in the group with good family support, the majority, namely 17 people (56.7%) showed adherence to the diet, and only 3 people (10%) were non-compliant. From the test results above, it produces a p value = 0.001, which is smaller than α = 0.05. This indicates that there is a relationship between family support and dietary adherence in diabetes mellitus patients.

The results of this study support previous studies such as Oktavera et al. (2021) which showed a significant relationship between family support and dietary adherence in patients with diabetes mellitus, with p-values of 0.002 and 0.003, respectively. Family support plays a crucial role in the success of diet therapy, through motivation, information, and practical assistance. When patients feel cared for and supported, their intrinsic motivation to adhere to dietary recommendations increases. Conversely, a lack of support can decrease adherence and trigger resistance to lifestyle changes.

Therefore, health interventions must involve families as active participants in the disease management process, rather than solely targeting individual patients. This approach is considered more effective in improving dietary adherence and promoting successful overall diabetes control.

5. CONCLUSION

A study of 30 respondents in the Rose Room of Dr. Harjono S. Ponorogo Regional General Hospital showed that most diabetes mellitus patients received good family support (66.7%) and had a high level of dietary compliance, both before (70%) and during treatment

(60%). The Spearman Rank test results showed a significant relationship between family support and dietary compliance (r = 0.636; p = 0.001), which confirms the importance of the family's role in diabetes management.

Based on these findings, healthcare professionals are advised to actively involve families in the education and care process, particularly regarding dietary management. Patients are expected to be receptive to family support, while families are encouraged to consistently provide emotional support, information, and practical assistance. Hospitals can develop family-based intervention programs to improve treatment effectiveness. Future research is expected to explore other factors influencing dietary adherence, such as education, income, and patient psychological well-being.

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