Jurnal Multidisiplin Sahombu
Volume 5, Number 08, 2025, DOI 10.58471/jms.v5i08
ESSN 2809-8587 (Online)
https://ejournal.seaninstitute.or.id/index.php/JMS/index

The Relationship of Family Support in Compliance with Treatment in Diabetes Mellitus Patients at Sentra Medika Cibinong Hospital in 2024

Fany Koesmawaty[1], Elly[2], Ns. Ananda Patuh Padaallah[3], Aprilina Sartika[4]
[1,2,3,4] University of Medika Suherman

Article Info

Keywords:
Family Support, Treatment Compliance, Diabetes Mellitus, Diabetes Mellitus Patients

ABSTRACT

Diabetes Mellitus is a metabolic disease characterized by increased blood glucose levels, known as hyperglycemia due to impaired insulin secretion and insufficiency of insulin function itself and can result in death or disability, and have a significant impact on the quality of life of sufferers. This study aims to identify the characteristics of respondents and provide a demographic overview of the relationship between family support in compliance with treatment in Diabetes Mellitus patients at Sentra Medika Cibinong Hospital. This study uses a cross-sectional quantitative research method and emphasizes the time spent measuring or observing dependent and independent variable data one by one on 62 samples from 160 populations in October to November at Sentra Medika Cibinong Hospital. Based on the Kolmogorov-Smirnov data normality test and the research obtained asymp.sig (2-tailed) of 0.576 or > 0.05 meaning that the data is normally distributed and based on the statistical analysis of the chi-square test shows that P-Value = 0.005 (P <alpa 0.05), then Ha is accepted which means that there is a relationship between high family support and increased compliance with care at Sentra Medika Cibinong Hospital. From the results of this study, data analysis and discussion, the purpose of the study has been answered, namely there is a relationship between family support and compliance with care in diabetes mellitus patients at Sentra Medika Cibinong Hospital in 2024. The results of this study are expected to provide input for Sentra Medika Cibinong Hospital in an effort to provide promotion to diabetes mellitus patients regarding the importance of maintaining compliance in carrying out self-care activities.

Corresponding Author:
Fany Koesmawaty
University of Medika Suherman
kusmawatyfany89@gmail.com

INTRODUCTION

Diabetes Mellitus is a metabolic disease characterized by impaired carbohydrate, fat, and protein metabolism, leading to elevated blood sugar levels, or hyperglycemia. This condition is caused by impaired insulin secretion and insufficient insulin function. This can lead to serious complications such as nerve damage, kidney disorders, heart disease, blindness, and an increased risk of death or disability, significantly impacting the sufferer's quality of life. Non-compliance with the management of this disease often worsens the patient's condition,

Jurnal Multidisiplin Sahombu
Volume 5, Number 08, 2025, DOI 10.58471/jms.v5i08
ESSN 2809-8587 (Online)
https://ejournal.seaninstitute.or.id/index.php/JMS/index

requiring consistent medication and lifestyle adjustments. This makes it difficult for them to maintain normal blood sugar levels (Purwaningtyas, 2020).

According to the World Health Organization (WHO), the number of people with diabetes mellitus is estimated to reach 300 million worldwide by 2025, indicating that this disease poses a serious threat to global health. Meanwhile, data from the Indonesian Ministry of Health (Kemenkes) in 2022 shows that in 2021, more than 236,000 people with diabetes mellitus in Indonesia died from complications of the disease. These data confirm that diabetes mellitus is a public health problem that requires serious attention and treatment.

According to the American Diabetes Association (ADA, 2021), diabetes mellitus management is not limited to medication administration but also includes dietary management, physical activity, blood glucose monitoring, and psychosocial support. Family support plays a crucial role in improving patient adherence to treatment and a healthy lifestyle. Several studies have shown that patients with good family support tend to be more disciplined in monitoring blood sugar levels, following medication schedules, and adopting a healthy lifestyle (Friedman et al., 2018).

According to Pender (2015), social support, including support from family, is a crucial factor influencing a person's health behaviors. Family members who provide motivation, attention, and practical assistance can improve patient adherence to therapy and reduce stress. This aligns with the findings of Schilling et al. (2016), who found that diabetes mellitus patients who received emotional and instructional support from their families had better blood sugar control than those who received less support.

Furthermore, a study by Mayberry & Osborn (2014) showed that families play a role as mediators in patient health-related decision-making. Family support can influence patient adherence to diet, medication, and physical activity recommendations from healthcare professionals. This support can take the form of supervision, motivation, medication reminders, and assistance in dealing with disease complications.

In the nursing context, implementing the four pillars of nursing—health education, health promotion, medication administration, and emotional support—can help reduce the risk of diabetes mellitus complications and improve patient adherence. Family support is a crucial pillar because it plays a direct role in helping patients adopt a healthy lifestyle, reminding them of medication schedules, and providing psychological support to prevent them from giving up hope in the face of the disease (Potter & Perry, 2021).

Based on the above description, researchers are interested in understanding the relationship between family support and adherence to treatment in diabetes mellitus patients at Sentra Cibinong Hospital in 2024. This study is expected to provide an overview of the importance of the family's role in diabetes mellitus management and provide recommendations for healthcare professionals to improve family support for patients.

METHOD

The purpose of this study was to identify respondent characteristics and provide a demographic overview of the relationship between family support and adherence to treatment in patients with diabetes mellitus at Sentra Medika Hospital, Cibinong. The study

Jurnal Multidisiplin Sahombu
Volume 5, Number 08, 2025, DOI 10.58471/jms.v5i08
ESSN 2809-8587 (Online)
https://ejournal.seaninstitute.or.id/index.php/JMS/index

used a quantitative approach with a cross-sectional design, where data collection occurs at a single point in time to observe the dependent and independent variables simultaneously (Nursalam, 2020). This cross-sectional approach was chosen because it allows researchers to obtain a snapshot of the relationship between family support and patient adherence over a specific period without needing to follow patient progress longitudinally (Creswell, 2014).

This study was conducted in the adult inpatient ward of Sentra Medika Hospital, Cibinong, with data collection from December 30, 2024, to January 27, 2025. The study population consisted of all 160 patients with diabetes mellitus admitted to the hospital between October and November 2024.

The sample was selected using the Slovin formula to obtain a representative sample of the population and minimize potential bias. With a margin of error of 10% (e = 0.1), the sample size was 62 respondents. The use of the Slovin formula is supported by Sugiyono (2017), who stated that this method is effective for determining sample size in quantitative research with a specific population, enabling research results to be generalized with a high degree of confidence.

According to Polit & Beck (2017), selecting a cross-sectional design in quantitative research offers advantages in terms of time, cost, and labor efficiency, as all data is collected simultaneously and allows for rapid identification of relationships between variables. Furthermore, Babbie (2016) emphasized that a cross-sectional design is suitable for research aimed at studying the prevalence, characteristics, and correlations between variables in a specific population.

In this study, data collection was conducted using a structured questionnaire that assessed family support and patient adherence to treatment. Family support was measured based on patient perceptions of emotional support, motivation, medication reminders, and family involvement in daily care (Friedman et al., 2018; Mayberry & Osborn, 2014). Meanwhile, patient compliance is measured based on adherence to diet, medication, physical activity, and blood sugar monitoring (American Diabetes Association, 2021).

This approach is supported by Nursalam (2018), who stated that measuring variables in quantitative research must use valid and reliable instruments to ensure the data obtained is accurate and can be analyzed statistically. With this method, researchers are expected to clearly map the relationship between family support and patient compliance and provide useful recommendations for nursing practice in hospitals.

RESULTS AND DISCCUSION

Univariate Results

Frequency Distribution of Respondent Characteristics

Respondent Age

Table 1. Frequency Distribution of Respondent Age at Sentra Medika Cibinong Hospital

Age	Frequency	Percentage (%)
< 50 Years	32	52 %
> 50 Years	30	48 %
Total	62	100 %

Jurnal Multidisiplin Sahombu
Volume 5, Number 08, 2025, DOI 10.58471/jms.v5i08
ESSN 2809-8587 (Online)
https://ejournal.seaninstitute.or.id/index.php/JMS/index

The table above shows that of the 62 respondents, 32 (52%) were diabetic patients aged <50 years. Meanwhile, 30 (48%) were diabetic patients aged >50 years.

Respondent's Gender

Table 2. Distribution of Respondents' Gender at Sentra Medika Cibinong Hospital

Gender	Frequency	Percentage (%)
Female	37	60 %
Male	25	40 %
Total	62	100 %

The table above shows that of the 62 respondents, 37 (60%) were female, while 25 (40%) were male.

3) Respondents' Duration of Suffering

Table 3. Frequency Distribution of Duration of Suffering at Sentra Medika Cibinong Hospital

Duration of Suffering	frequency	Percentage (%)
< 5 Years	46	74 %
> 5 Years	16	26 %
Total	62	100 %

The table above shows that of the 62 respondents, 46 (74%) had diabetes mellitus for less than 5 years, while 16 (26%) had diabetes mellitus for more than 5 years.

Frequency Distribution of Family Support Frequency Distribution of Respondents Based on Family Support

Table 4.

Family Support	Frequency	Percentage (%)
High	32	52 %
Low	30	48 %
Total	62	100 %

The table above shows that of the 62 respondents, the majority of diabetes mellitus patients (32) had high levels of family support, while a small minority (30) had low levels of family support.

Frequency Distribution of Treatment Compliance in Diabetes Mellitus Patients

Table 5. Frequency Distribution of Respondents Based on Treatment Compliance in Diabetes Mellitus Patients

Treatment Compliance	Frequency	Percentage (%)
Compliant	29	47 %
Non-Compliant	33	53 %
Total	62	100 %

The table above shows that out of a total of 62 respondents, the majority of patients with non-compliant treatment (33 people) (53%) were in the non-compliant category. Meanwhile, a small number of patients with compliant treatment (29 people) (47%) were in the compliant category.

Jurnal Multidisiplin Sahombu
Volume 5, Number 08, 2025, DOI 10.58471/jms.v5i08
ESSN 2809-8587 (Online)
https://ejournal.seaninstitute.or.id/index.php/JMS/index

Bivariate Results

Data Normality Test Results Kolmogorov-Smirnov Data Normality Test Table

Table 6.

		Unstandardized Residual
N		62
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	5,32931815
Most Extreme Differences	Absolute	,099
	Positive	,099
	Negative	-,057
Test Statistic		,781
Asymp. Sig. (2-tailed)		,576[c]

Based on Table 6 above, the results of the normality test for the research data obtained an asymp.sig value (2-tailed) of 0.576 or > 0.05. This can be interpreted or interpreted as meaning that the data is normally distributed.

Relationship between Family Support and Treatment Compliance in Diabetes Mellitus Patients

Table 7. Relationship between Family Support and Treatment Compliance in Diabetes Mellitus Patients

Family Support	Treatment Compliance				Total		*P Value*	*OR*
	Compliant		Disobedient					
	N	%	N	%	N	%		
High	21	66%	11	34%	32	100%		
Low	8	27%	22	73%	30	100%	0,005	5.250
Total	29	47%	33	53%	62	100%		

The table above shows that 21 patients (66%) had high family support, with compliant treatment adherence. Meanwhile, 22 patients (73%) had low family support and non-compliant treatment adherence at Sentra Medika Cibinong Hospital.

Based on statistical analysis, the chi-square test showed a P-value of 0.005 (P < alpha 0.05), thus Ha was accepted, indicating a relationship between high family support and treatment adherence at Sentra Medika Cibinong Hospital. The odds ratio showed that family support had a fivefold effect on patient treatment adherence.

Discussion of Univariate Analysis

Frequency Distribution of Respondent Characteristics

1. Respondent Age

   Researchers believe that age is a significant factor in increasing the risk of developing diabetes mellitus, especially after reaching the age of 50. During this age range, glucose intolerance begins to increase, which can lead to high blood sugar levels. With increasing age, the risk of developing diabetes mellitus also increases.

Jurnal Multidisiplin Sahombu
Volume 5, Number 08, 2025, DOI 10.58471/jms.v5i08
ESSN 2809-8587 (Online)
https://ejournal.seaninstitute.or.id/index.php/JMS/index

2. The aging process also contributes to the increase in cases of diabetes mellitus, in addition to hereditary factors, which cannot be ignored. Therefore, maintaining a healthy lifestyle, regular exercise, and controlling food intake are crucial to preventing the development of diabetes mellitus, especially for individuals aged 50 and over.
3. Respondent Gender
   Researchers believe that gender may play a role in the risk of developing diabetes mellitus, with women having a greater chance of developing diabetes than men. This may be due to several factors, such as women's tendency to be less physically active, increasing age, unhealthy diet, obesity, and a history of childbirth.
4. Respondents' Duration of Suffering
   According to this study, diabetes mellitus patients who have had the disease for a long time can still adapt to their environment, as long as they are able to manage their emotions and protect themselves. Family support also contributes significantly to controlling diabetes mellitus in patients.

Frequency Distribution of Family Support

According to the researchers, the treatment process, especially for diabetes mellitus, is crucial. If not carried out properly and appropriately, further complications can occur. In this regard, family is one factor that can assist in the treatment process. Family is a vital part of every individual, including those living with diabetes mellitus. It is undeniable that when someone faces this condition, they often experience difficult times. Therefore, it is important for them to start improving themselves and managing their diet and daily activities.

Support from those closest to them, especially family, is crucial in this process. By providing an understanding of diabetes mellitus to the family, it will be easier to manage their diet and follow the necessary treatment program. According to the Indonesian Food and Drug Authority (BPOM RI), the environment and family support play a significant role in increasing patient compliance in undergoing treatment (Indirawaty, et al., 2021).

Treatment Compliance in Diabetes Mellitus Patients

According to researchers, diabetes mellitus patients must be compliant with the treatment process. Diabetes patient compliance is closely related to their self-care and self-management behaviors. This involves the patient's active involvement in monitoring and responding to changes in their environment and biological conditions, by adjusting various aspects of their care to maintain metabolic balance and reduce the risk of complications.

Self-care behaviors include home blood or urine glucose monitoring, dietary adjustments, medication management (both insulin and oral hypoglycemic drugs), physical activity routines, wound care, regular doctor visits, and other behaviors that may vary depending on the type of diabetes (Fadli, 2023).

Bivariate Analysis Discussion

Relationship Between Family Support and Treatment Adherence in Diabetes Mellitus Patients

The results showed that 21 respondents (66%) were compliant with their diabetes mellitus treatment. One of the main factors influencing this level of compliance is the level of family support received by the patient. Patients with high levels of family support tend to be

Jurnal Multidisiplin Sahombu
Volume 5, Number 08, 2025, DOI 10.58471/jms.v5i08
ESSN 2809-8587 (Online)
https://ejournal.seaninstitute.or.id/index.php/JMS/index

more motivated to adhere to treatment effectively because they feel cared for and supported. Conversely, patients with low levels of family support tend to feel less cared for, which results in decreased treatment adherence.

A supportive family plays a role in reminding patients to take their medication, undergo therapy, and maintain a healthy lifestyle. Conversely, patients who do not receive reminders or encouragement from their family are more prone to neglecting their treatment. Furthermore, emotional support from family can reduce patients' stress and anxiety, making them more optimistic and confident in their treatment.

Conversely, patients with minimal emotional support are more likely to experience psychological distress, which can reduce their awareness of their own health. In addition to emotional aspects, patients with caring families also tend to receive more information about the importance of treatment adherence. Conversely, patients with low levels of support may receive less education or lack someone to help them understand the importance of following treatment properly.

Based on these findings, researchers believe that family support plays a crucial role in improving patient adherence to treatment at Sentra Medika Cibinong Hospital. Therefore, efforts to improve patient adherence can be made by involving family education and empowerment in the care process.

CONCLUSION

Based on the research results, data analysis, and discussion outlined in the previous chapter, the research objective has been met: there is a relationship between family support and treatment adherence in diabetes mellitus patients at Sentra Medika Hospital, Cibinong, in 2024. Nearly half of the respondents (32 respondents) were aged <50 years, indicating a higher prevalence of diabetes mellitus in adults compared to the elderly. Furthermore, 37 respondents (60%) were female, indicating a higher level of physical activity, with women tending to have lower levels of physical activity than men. Forty-six respondents (74%) had been diagnosed with diabetes mellitus for less than five years. This study indicates that long-term diabetes mellitus patients are still able to adapt to their environment. The majority of respondents (32 respondents) had high levels of family support, indicating that family support for diabetes mellitus patients was generally good and helpful in the treatment process. Most respondents experienced an increase in non-compliant treatment compliance, namely 33 people (53%), which means that respondents who were non-compliant with treatment were more due to the lack of active patient involvement in monitoring and responding to environmental changes and biological conditions, by adjusting various aspects of treatment to maintain metabolic balance and reduce the risk of complications. Based on the results of the research that has been conducted, this study proves that there is a relationship between family support in treatment compliance in diabetes mellitus patients at Sentra Medika Cibinong Hospital, where the P-Value is 0.005 (P <0.05), which means there is a relationship between family support and treatment compliance.

Jurnal Multidisiplin Sahombu
Volume 5, Number 08, 2025, DOI 10.58471/jms.v5i08
ESSN 2809-8587 (Online)
https://ejournal.seaninstitute.or.id/index.php/JMS/index

REFERENCE

American Diabetes Association. (2021). *Standards of medical care in diabetes—2021.* Diabetes Care, 44(Supplement 1), S1–S232.

Babbie, E. R. (2016). *The practice of social research* (14th ed.). Boston: Cengage Learning.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.

Friedman, M. M., Bowden, V. R., & Jones, E. G. (2018). *Family nursing: Research, theory, and practice* (7th ed.). Pearson.

Indirawaty, dkk. (2021). Hubungan Pengetahuan dan Dukungan Keluarga dengan Rutinitas dalam Mengontrol Gula Darah pada Penderita Diabetes Melitus Tipe 2. *Jurnal Ilmu Pendidikan Nonformal*, 7(1). Diakses dari https://ejurnal.pps.ung.ac.id/index.php/Aksara/article/view/381

Irawan, E. (2019). Dukungan Keluarga Pada Pasien Diabetes Mellitus Tipe II di Wilayah Binaan Puskesmas Babakan Sari. *Jurnal Keperawatan BSI*, 7(2). http://ejurnal.ars.ac.id/index.php/keperawatan

Kementerian Kesehatan Republik Indonesia. (2022). *Profil kesehatan Indonesia 2022.* Jakarta: Kemenkes RI.

Kementrian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi. (2019). Atasi Si Manis Dengan Edukasi. https://menpan.go.id/site/berita-terkini/atasi-si-manis-dengan-klinik-edukasi

Mayberry, L. S., & Osborn, C. Y. (2014). Family support, medication adherence, and glycemic control among adults with type 2 diabetes. *Diabetes Care, 37*(6), 1889–1895.

Nasution, F., Andilala, A., & Siregar, A. A. (2021). Faktor Risiko Kejadian Diabetes Mellitus. *Jurnal Ilmu Kesehatan, 9*(2), 94. https://doi.org/10.32831/jik.v9i2.304

Nursalam. (2018). *Metodologi penelitian ilmu keperawatan: Pendekatan praktis.* Jakarta: Salemba Medika.

Nursalam. (2020). *Konsep dan penerapan penelitian keperawatan: Penelitian kuantitatif, kualitatif, dan mix method.* Jakarta: Salemba Medika.

Parinduri, J., Siregar, S., Khairunnisa, N., et al. (2023). Pengaruh Dukungan Keluarga Terhadap Kepatuhan Pasien Menjalani Perawatan Luka Ulkus Diabetik. https://www.mendeley.com/catalogue/3ef7c82b-f773-3b5e-b100-7cda61b2ca8f/

Polit, D. F., & Beck, C. T. (2017). *Nursing research: Generating and assessing evidence for nursing practice* (10th ed.). Philadelphia: Wolters Kluwer Health.

Prasetya, S., Irawan, A., & Rahman, S. (2023). Hubungan Motivasi Terhadap Kepatuhan Pengobatan Pada Penderita Diabetes Melitus Tipe II. https://www.mendeley.com/catalogue/20be73c1-c0c9-31cc-9472-c281342675ab/

Purwaningtyas, P. (2020). Hubungan kepatuhan pasien diabetes melitus dengan kontrol glikemik. *Jurnal Kesehatan Masyarakat, 15*(2), 101–110.

Sugiyono. (2017). *Metode penelitian kuantitatif, kualitatif, dan R&D.* Bandung: Alfabeta.

WHO (World Health Organization). (2025). *Global report on diabetes.* Geneva: WHO.