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Article Research

The Influence Of Family Empowerment On Family Support For Diabetes Patients In Self-Care

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Abstract

Background: Patients with diabetes mellitus must be able to carry out self-care activities independently. The family as the closest person to the sufferer plays an important role in helping his family members. With an approach based on empowerment and involvement of the family as a companion, it is hoped that there will be suppression and prevention of disease for sufferers, increasing the ability and supporting the independence of care recipients.
Aims: The purpose of this study was to determine the effect of family empowerment on family support in diabetes patients in self-care.
Methods: This researcher used quantitative research with a quasi-experimental design with a two-group pre-test and post-test design approach. Using 2 research groups, namely the intervention group and the control group. The research sample consisted of 60 respondents, divided into 30 intervention groups and 30 control groups. The sampling technique used was a purposive sampling approach and data collection used a family support questionnaire.
Results: Family support before being given family empowerment in the control group and the intervention group was the same, namely 18 (60.0%) in the less category. After being given family empowerment in the control group, namely most or as many as 8 (26.7%) with a good category P value result of 0.007 and as many as 16 (53.3%) with a good category P value result of 0.000 (0.05)) in the intervention group. It is expected that respondents will improve the behavioral aspects in providing support such as the knowledge aspect, namely digging deeper into information in providing support to diabetic patients while in the attitude aspect, they are more able to accept or respond to the limitations and problems experienced by diabetics.
Conclusion: There is influence of family support before and after family empowerment is carried out in diabetes patients in carrying out self-care at the Ajung Health Center.

Keywords: family empowerment; family support; diabetes mellitus, self care

INTRODUCTION

Diabetes Mellitus is a degenerative disease that causes economic impact, complications and death worldwide (Pramita et al., 2021). The high prevalence of diabetes mellitus will indirectly increase the complications caused by the disease. In general, diabetes mellitus patients experience stress because they are unable to carry out self-care activities independently to manage their disease (Rantung, 2013). By involving the family, it is hoped that it can increase adherence to self-care carried out by diabetes mellitus patients so that it has an impact on their quality of life.

Data from the World Health Organization (WHO) states that 422 million people in the world suffer from diabetes mellitus or have it an increase of about 8.5% in the adult population and an estimated 2.2 million deaths with a percentage of diabetes mellitus occurring before the age of 70 years, especially in countries with low-medium economic status. In fact, it is estimated that it will continue to increase by around 600 million people in 2035 (Ministry of Health RI, 2018). In 2021, the International Diabetes Federation (IDF) recorded 537 million adults (aged 20-79 years) or 1 in 10 people living with diabetes mellitus worldwide. Diabetes mellitus also causes 6.7 million deaths or 1 every 5 seconds. Indonesia is in fifth position with the number of people with diabetes mellitus of 19.47 million. With a population of 179.72 million, this means that the

prevalence of diabetes mellitus in Indonesia is 10.6%.

IDF noted that 4 out of 5 people with diabetes mellitus (81%) live in low and middle income countries. This also makes the IDF estimate that there are still 44% of adults with diabetes mellitus who have not been diagnosed (Kemenkes RI, 2018).

The increase in the prevalence of diabetes mellitus at the age of ≥ 15 years is quite significant, from 6.9% in 2013 to 8.5% in 2018, so that the number of people with diabetes mellitus in Indonesia reaches more than 16 million people, who are then at risk of developing, such as heart attacks, strokes, blindness and kidney failure can even cause paralysis and death (Kemenkes RI, 2019). The incidence of diabetes mellitus in East Java Province is included in the top five in Indonesia. According to Riskesdas, the prevalence of DM in 2013 was 2.1%, while in 2018 the prevalence of DM diagnosed by doctors in people aged over ≥15 years increased to 2.6%. According to the Jember District Health Office the number of people with Diabetes Mellitus in 2021 is 37,786 people,

Based on a preliminary study conducted by researchers at the Ajung Health Center health office, it is included in the top 10 with the highest number of diabetics. Data from the Ajung Health Center found that the number of people with diabetes mellitus in 2022 was 1214 sufferers in improving their quality of life and improving the function of these families in caring for sick family members. Family involvement in the management of diabetes mellitus will help people with diabetes to reduce stress about the disease, help control blood sugar and help increase self-confidence.

With an approach based on empowerment and involvement of the family as a companion, it is hoped that there will be suppression and prevention of disease as well as health promotion for people with diabetes mellitus, increasing family capacity and supporting the independence of care recipients (Rasnah et al., 2019). Family empowerment is a nursing intervention used by nurses to help families care for and provide assistance to family members with chronic illnesses and is seen as the most important element for successful treatment. Robinson (1996) explains that empowerment interventions carried out in families are by being a good listener, compassionate, non-judgmental, collaborator, motivating the emergence of family strength, family participation and involvement in the process of change and healing of disease. According to suggests that the evaluation of family-oriented interventions aims to improve self-efficacy, self-management, glycemic control, self-care activities and quality of life of people with diabetes mellitus (Pramita et al., 2021).

Empowerment of families as a companion to care for people with diabetes mellitus in health management programs, especially for those who can promote various forms of social support in disease control, prevention of serious complications due to poor control and strengthening bonds between family members (Rasnah et al., 2019). Family empowerment is carried out through 4 stages of the family empowerment process which run sequentially aiming to introduce, promote, and improve the ability of the family to meet health needs and to maintain family life based on the ideology of empowerment which makes all family members have the ability and strength and the capacity to grow and become more competent (Ardian, 2014). With good family empowerment, it is hoped that good family support can provide attention, arrange treatment times, provide information related to the disease. If family empowerment is not good, then family support is also lacking, such as patients feel they are not being cared for, there is no time for treatment and they do not provide

information regarding the disease they are experiencing.

Family support is verbal or non-verbal information, advice, real help or behavior provided by people who are familiar with the subject in their environment or in the form of presence and things that can provide emotional benefits and affect the behavior of the recipient (Nurti et al., 2019). Family support is defined as assistance provided by other family members so that it will provide physical and psychological comfort to people suffering from diabetes mellitus. A person with good family support is more likely to be successful in dealing with and running a self-care program. Suboptimal family support can cause patients to feel tired and bored in practicing self-care. Efforts to improve the patient's ability to perform self-care is by empowering the family so that later it will have an impact on improving the quality of life.

METHOD

This research was conducted in the village of Puskesmas Ajung, Jember Regency. There are 7 villages namely Ajung, Kelomngan, Pancakarya, Wirowongso, Sukamakmur, Mangaran and Rowo Indah from April 2023 to May 2023.

Design

This research uses quantitative research with a quasi-experimental research design with a two group-pre test and post test design approach. By using 2 research groups where one group received treatment or intervention while the other group did not receive treatment or control. The population in this study were families with patients diagnosed with diabetes mellitus at the Ajung Health Center, Jember Regency with a total of 70 patients in November - December 2022.

Sample

The sample in this study was 60 respondents divided into an intervention group of 30 people and a control group of 30 people. The sampling technique used is a non-probability sampling technique with a purposive sampling approach.

Data analysis

This study used an instrument in the form of a family support questionnaire developed by DOOL Brief Clinical Inventory Burroughs (2004), and has been adapted in research (Nopertinus, 2022) consists of 17 questions, covering aspects of emotional support, instrumental support, appreciation support and information support. Data analysis used the Wilcoxon test

RESULTS

Table 1.
Family Support Before and After Family Empowerment in the Control and Intervention Groups

No	Categori	Control				Intervension			
		Pretest		Postest		Pretest		Postest	
		F	%	F	%	F	%	F	%
1	Good	2	6,7	8	26,7	5	16,7	16	53,3
2	Enough	10	33,3	11	36,7	7	23,3	12	40,0
3	Less	18	60,0	11	36,7	18	60,0	2	6,7
Total		30	100,0	30	100,0	30	100,0	30	100,0

Table 2.
Shapiro Wilk Data Normality Test

Group	N	Sig(2-tailed)	Information
Intervention	30	0.010	Abnormal
Control	30	0.000	Abnormal

Before the data regarding family empowerment for family support in diabetic patients at the Ajung Health Center is further processed, a normality test is first performed with the Shapiro Wilk test statistic because the number of samples is < 100, if sig < 0.05 (normal distribution), if sig < 0.05 (distributed not normal). Based on the table above, it can be concluded that

all data are not normally distributed because sig (2-tailed) < 0.05.

Table 3.
Wilcoxon Test Results for the Pre and Post Intervention and Control Groups

Categori	Intervension		Control		P value
	Pre	Post	Pre	Post	
Good	5	16	2	8	
Enough	7	12	10	11	0,000
Less	18	2	18	11	0,007

Based on the table above, the Asymp value is obtained. Sig. (2-tailed) intervention group, namely 0.000 and 0.007 <0.05, then Ho is rejected and Ha is accepted, which means that there is an effect of family empowerment on family support in diabetes patients in self-care at the Ajung Health Center.

Table 4.
Results of the Man Whitney Test for the Post Intervention Group and the Post Test Control Group

Categori value	Control Post		Intervension Post		P
	F	%	F	%	
Good	8	26,7	16	53,3	0,001
Enough	11	36,7	12	40,0	
Less	11	36,7	2	6,7	

Based on the output of "Test Statistics" it is known that the Asymp. Sig. (2-tailed) of 0.001 <0.05. Then it can be concluded that "Hypothesis accepted". Thus it can be said that there are differences in family support after empowerment in the control group and after empowerment in the intervention group. Because there is a significant difference, it can be said that "there is an influence of family empowerment on family support in diabetes patients in carrying out self-care"

DISCUSSION

Family Support Before and After Performing Family Empowerment in Control and Intervention Groups

Before a change in behavior occurs, a person will have a perception of what he will be going through, giving rise to a perception related to the level of skill obtained from information and knowledge, so that if the information received is not clear, the results obtained will also not be optimal. Lack of or have not received information about diabetes. The results of research by Trisnadewi et al (2018) concluded that information and knowledge can be obtained through health education or education, respondents and patients understand more about the management of diabetes mellitus. Providing intensive family education can encourage increased knowledge and a better quality of life and increase information support to be given to sufferers.

Then based on the results of the study, most of the respondents had diabetes for 4-5 years. The results of this study are in line with the results of research which revealed that the length of time suffering from diabetes had an effect on negative emotional support in the study, in fact they had suffered from diabetes for a long period of > 5 years. So that it can be said that the family is still very enthusiastic about providing emotional support to respondents who have recently suffered from diabetes mellitus(Kartika et al., 2017).

From the explanation above, the researcher assumes that the results of the data obtained before the family empowerment was carried out, most of the respondents had a low level of family support, which was obtained because most of the respondents had never received information and knowledge support in the management of diabetes mellitus. Based on NANDA (2018), states the problem of decreasing family coping as inadequacy and ineffectiveness of the family in helping clients to manage and master adaptive tasks related to health problems. This is due to several related factors, among others; long-lasting illness and depletes the supportive abilities of the family, lack of information on the family, inadequate family understanding and incorrect information to

families about health problems faced by families (NANDA, 2018). This study shows that respondents have never been given family empowerment related to diabetes mellitus. Therefore, there is a need for information, education and demonstrations that can increase the knowledge of respondents in order to provide maximum family support to diabetes patients.

Based on table 1 it is also known that the results of family support after being given family empowerment in the control group and the intervention group were mostly or as many as 8 (26.7%) in the good category, the rest were in the adequate and lacking categories in the control group, and most or as many as 16 (53.3%) in the good category, the rest were in the adequate and poor category in the intervention group.

This is in line with the explanation or theory put forward by Graves (2007) which states that family empowerment is a mechanism that allows changes in family capabilities as a result of nursing interventions that focus on health promotion or education and cultural suitability that affect treatment and family development. . The concept of family empowerment has three main components. First, that all families have power and are able to build on that power. Second, family difficulties in meeting their needs are not due to an inability to do so, but because the family's social support system does not provide opportunities for families to achieve them. Third, in an effort to empower families, family members seek to apply skills and competencies in the context of changes in the family. The results of Nani Nurhaeni's research (2011) also showed the same result that families who were given empowerment using the module had better levels of knowledge, attitudes, skills and support than families who were not given empowerment. In line with the results of research conducted by Trisnadewi et al. (2018) who concluded that one of the nursing interventions that can be carried out to overcome the problem of ineffective health care is health education. With health education, patients and family members can understand more about the management of diabetes mellitus.

According to the theory of Lawrence Green (1980) in Notoatmodjo (2012) which states that human behavior can be influenced by two main factors, namely behavioral factors (behaviour causes) and factors outside of behavior (non-behaviour causes). Furthermore, the behavior itself is determined and formed from three main factors, namely predisposing factors including knowledge, attitudes and so on. Family empowerment is included in the predisposing factors. Furthermore, enabling factors include the physical environment, the availability or not of occupational health facilities or facilities, for example the availability of funds and training. It is concluded that the behavior of a person or community regarding health is determined by knowledge, attitudes, beliefs, traditions, and from the person or community concerned. In addition, the availability of facilities

The higher a person's knowledge and education will increase his skills, the more experience a person will add to his skills, the existence of a supportive environment and facilities will increase skills. Experience builds someone who can take further actions to be better, because they have been able to take actions in the past. The skills and abilities that a person has will make him skilled in carrying out the skills that have been taught (Widayatun, 2019).

From the explanation above, the researcher assumes that the results of the data obtained from the intervention group, most of which experienced significant changes. Most or as many as 16 (53.3%) respondents in the good category. Only 11 respondents experienced a significant change to a good category after the family empowerment intervention. While 16 respondents from

the less category turned into the sufficient category. These changes are caused by changes in behavior, one of which is self-care. Self-care is a form of a person's behavior in maintaining health and development in life (Baker & Denyes, 2008) where this is seen in respondents who usually rarely or never cook special dishes for patients with significant changes to being very concerned about people with diabetes mellitus. The behavior of these respondents experienced a significant increase because they had received family empowerment. The family empowerment process starts from the phase of building a trusting relationship with the respondent, the next phase is identifying family support and participation for the respondent, after that providing health education about diabetes mellitus, demonstrations, to collaboration on how to care for diabetes mellitus patients. So as to increase knowledge, attitudes and actions of respondents in caring for or providing family support to overcome health problems in family members who suffer from diabetes mellitus. Then evaluate family support to respondents after being given the intervention.

Analysis of the Effect of Family Empowerment on Family Support in Diabetic Patients in Performing Self-Care at the Ajung Health Center

The effect of family support on respondents before and after the intervention can be seen in table 4. Before the family empowerment intervention was given to the respondents, most of the family support was in the poor category, 18 (60.0%), but after giving family empowerment, 16 respondents (53.3%) turned into a good category.

Whereas in table 4 it is known that family support after being empowered in the control group is 8 (26.7%) in the good category, 11 (36.7) in the sufficient category and 11 (36.7%) in the less category. Whereas in the intervention group 16 (53.3%) were in good category, 12 (40.0%) were in sufficient category and 2 (6.7%) were in poor category.

The results of this study are in line with the explanation or theory put forward by (Notoadmodjo, 2007) Family empowerment aims to foster knowledge, understanding, and health awareness for families. Knowledge and awareness about ways to maintain and improve health is the beginning of health empowerment. Other research says that family empowerment interventions will result in a significant increase in the provision of support, the ability to make the right decisions and in disease management (Funnell et al., 2016). With an approach based on empowerment and family involvement as a companion, it is hoped that there will be suppression and prevention of disease as well as health promotion for people with diabetes.

The results of this family support occur because there is a process of changing the behavior of respondents when providing family support. Notoadmodjo (2012) explained that before people adopt new behaviors, a sequential process occurs within that person, namely Awareness (awareness) where the person is aware in the sense of knowing in advance about the stimulus (object), Interest (feels attracted) to the stimulus or object. the. Here the subject's attitude begins to emerge, Evaluation (considering) whether the stimulus is good for him or not, Trial where the subject starts trying to do something according to what the stimulus wants, and Adaptation where the subject has behaved in a new way according to his knowledge, awareness and attitude to stimuli.

Providing treatment in the form of family empowerment with education and health education methods, as well as demonstrating ways to treat diabetics can increase the role of the family in helping diabetes patients. This is in accordance with the opinion of Friedman (1998), that the

family is a collector and desiminator (spreader) of information that can contribute specific suggestive actions to individuals. The level of support from the respondent's family within 4 weeks after being given the intervention experienced a gradual increase through family empowerment by providing education, demonstrations to collaborative self-care for the respondent's family members.

From the explanation above, the researcher argues that the results of the data have been measured and tested, stating that there is an effect of family empowerment on family support in diabetes patients in carrying out self-care. Andren and Elmstahl (2007) in Ratnasari and Prasinta (2018) explain that even though families experience psychological problems in caring for sick family members, providing empowerment interventions using the caregiver empowerment model can provide benefits to the family's ability to be able to solve the problems they face.

Johnson (2001) in Ratnasari and Prasinta (2018) also explains how to empower (empowerment) families by saying that interventions aimed at helping families who are at risk of experiencing problems can be carried out by providing encouragement or family mobilization by helping families identify, identify, and utilize strengths and family resources to positively influence the health of sick family members.

CONCLUSION

Based on the results of research on the effect of family empowerment on family support in diabetes patients in carrying out self-care at the Ajung Health Center in May 2023, it can be concluded:

1. The level of family support for families with diabetes at the Ajung Health Center before family empowerment was given was in the poor category.
2. The level of family support for families with diabetes at the Ajung Health Center after being given family empowerment is in the good category.
3. There is an influence before and after family empowerment on family support for diabetes patients in carrying out self-care at the Ajung Health Center.

Abbreviations

WHO: World Health Organization; IDF: International Diabetes Federation .

REFERENCES

Ardian, I. (2014). Family empowerment as a family nursing intervention. Sultan Agung Scientific Magazine, 41–53. http://research.unissula.ac.id/file/publikasi/210997003/4129

American Association of Diabetes Educators. 2014. AADE7 Self-Care Behaviors.

Asdar, F., Irmayani, I., & Alfiah, A. (2022). Empowerment of Family Psychological Support with Diet Compliance for Diabetes Mellitus Patients in Bontolemngan Village, Bontoa District. The Idea of Community Service, 2(5), 224–230.

Baker and Denyes. 2008. Predictor of Self-care in Adolescents With Cystic Fibrosis: A test of Orem's Theories of Self-care and Self Care Deficit. Journal Of Pediatric Nursing

Friedman, M. (2010). Textbook of Family Nursing: Research, Theory, and Practice 5th Edition. Jakarta EGC.

Friedman, MM, Bowden, VR, & Jones, EG (2014). Family Nursing Research Theory & Practice (5th edition). New York: Medical Books.

Johnson, S. (2001). Helping children to eat right. Nutrition, health and safety. Journal of Early Education and

Graves, KN (2007). Family Empowerment as a Mediator between Family-Centered Systems of Care and Changes in Child Functioning: Identifying an Important Mechanism of Change. Washington: Springer Science and Business Media.

Green, L. 1980. Planning, Health Education A Diagnostic Approach. Jakarta: Development Project of the Faculty of Public Health, Ministry of Education and Culture, Republic of Indonesia

North American Nursing Diagnosis Association. 2018. Nursing Diagnoses: Definitions and Classification 2018-2020. Jakarta: EGC Medical Publishers

Nurti, MH, Nabuasa, E., & Ndun, HJN (2019). Family Support and Diet Management Behavior in Patients with Diabetes Mellitus. Lontar : Journal of Community Health, 1(1), 1–6. https://doi.org/10.35508/ljch.v1i1.2116

Notoatmodjo, Soekidjo. 2012. Health Research Methodology. Jakarta: Rineka Cipta

Notoatmodjo, S. 2018. Health Research Methodology. Jakarta: Rineka Cipta.

Pramita, R., Nasution, SS, Purba, J., & Marlinda. (2021). Family-Based Empowerment Intervention for Improving Self-Care Behavior in Patients with Type 2 Diabetes Mellitus. Journal of Telenursing (JOTING), 3(2), 784–796.

Ratnasari, TB, Prasinta, AD (2018). Effect of Family Empowerment In Increasing Family Coping With Diabetes Mellitus Type 2 In The Krajan And Krajan Hamlet, Glagahwero village, Panti Districts, Jember Regency.The Indonesian Journal of Health Science, 141-144.

Sakanashi, S., & Fujita, K. (2017). Empowerment of Family Caregivers of Adults and Elderly Persons: A Concept Analysis. International Journal of Nursing Practice, 23(5),1-9.

Solekhah, & Sianturi, SR (2020). Family Support Increases Diet Compliance in Patients with Type 2 Diabetes Mellitus. Idea Nursing Journal, 11(1), 17–23

Sunarti, E. (2008). Family Counseling and Empowerment Program. Bogor: Faculty of Human Ecology IPB

Trisnadewi, NW, Adiputra, IMS, & Mitayanti, NK (2018). Description of Knowledge of Patients with Diabetes Mellitus (DM) and their Families regarding the Management of Type 2 DM. Bali Medika Jurnal, 5(2), 165–187. https://doi.org/10.36376/bmj.v5i2.33

Yusra, A. (2011). Relationship Between Family Support and Quality of Life for Type 2 Diabetes Mellitus Patients at the Internal Medicine Polyclinic, Fatmawati General Hospital, Jakarta. Thesis. University of Indonesia. Jakarta.