The family/social support and impact on diabetic foot care practice

By Rita Sari

WORD COUNT	3993	TIME SUBMITTED	25-NOV-2022 08:42AM
		PAPER ID	93055077

Malahayati International Journal of Nursing and Health Science, Volume 05, No.2, September 2022: 108-115

MINH MALAHAYATI INTERNATIONAL JOURNAL OF NURSING AND HEALTH SCIENCE
ISSN 2620-9152 (Print)
ISSN 2621-4083 (Online)

Nomor: 85/M/KPT/2020

ARTICLE INFORMATION
Received: March, 24, 2021
Revised: November, 24, 2022
Available online: November, 25, 2022
at : http://ejurnalmalahayati.ac.id/index.php/nursing/index

The family/social support and impact on diabetic foot care practice

Rita Sari[1]*, Faridah Hashim[2], Meram Azzani[2], Janu Purwono[1]

[1]Universitas Muhammadiyah Pringsewu
[2]MAHSA University Malaysia
*Corresponding author. E-mail: ritasari@umpril.ac.id

Abstract

Background: In 2040 it is estimated that there will be more than 642 million people with diabetes in the world and as many as 80% of people with diabetes are in developing countries. And every 6 seconds there is one DM patient who dies. WHO estimates that in 2000 the number of people with DM in Indonesia was 8.4 million and in 2030 it will increase to around 21.3 million. In 2015 Indonesia stood in seventh position with 10 million sufferers. Indonesia is also the third country with 29 million people with impaired glucose tolerance (20 - 79 years) in 2015. The prevalence of diabetes mellitus in Lampung Province has increased with prevalence (1,2%).
Purpose: To determine the family/social support and impact on diabetic foot care practice.
Method: Using a descriptive correlational design to determine the relationship between variables. The sample is 107 respondents and the sample is taken using purposive sampling. The instrument used in this study was an original Spanish version translated into Bahasa Indonesia. The Social Support Questionnaire-Short Form (SSQ6S) questionnaire a. Foot care behavior was measured based on the foot nursing activity behavior scale for diabetes (FCBS) which consisted of 17 questions. Data analysis used chi-square(α=0,05).
Results: Correlation test showed that there was a relationship between the family/social support and impact on diabetic foot care practice. *p-value* = 0.033 (p<0.05).
Conclusion: The higher the family/social support and the positive impact on the practice of diabetic foot care.

Keywords: Family; Social support; Impact; Diabetic foot care; Practice.

INTRODUCTION

In 2040 it is estimated that there will be more than 642 million people with diabetes in the world and as many as 80% of people with diabetes are in developing countries (Ogurtsova, da Rocha Fernandes, Huang, Linnenkamp, Guariguata, Cho, & Makaroff, 2017). And every 6 seconds there is one DM patient who dies. WHO estimates that in 2000 the number of people with diabetes mellitus in Indonesia was 8.4 million and in 2030 the number of people with diabetes mellitus increased to around 21.3 million (Hariyono, & Sababa, 2018). In 2015 Indonesia stood at the seventh position with 10 million sufferers. Indonesia is also the third country with the number of people with impaired glucose tolerance (20 - 79 years) in 2015 amounted to 29 million people (International Diabetes Federation, 2015).

In 2017, the total number of people with diabetes mellitus in the world was 425 million people with The prevalence of 8.8% of the world's population lives with diabetes mellitus, if it is not handled properly the incidence of the disease Diabetes mellitus will increase to 629 million sufferers by 2045 (International Diabetes Federation, 2017).

DOI: https://doi.org/10.33024/minh.v5i2.6436

The prevalence of diabetes mellitus in Indonesia has seen a significant increase in the prevalence of diabetes mellitus significantly in the last 5 years from 6.9% in 2013 to 8.5% in 2018 an increase from 2013-2018 as much as 1.6%. In Indonesia, the highest prevalence of diabetes mellitus is in the province of DKI Jakarta (3.4%), East Kalimantan (3.3%), Yogyakarta (3.2%) and the prevalence of diabetes mellitus in Province has increased with prevalence (1.2%) (Ministry of Health Republic of Indonesia, 2018).

The results of interviews conducted on 15 Diabetes Mellitus (DM) patients who visited the Puskesmas Pringsewu 12 DM patients did not know about DM foot care. DM patients do not know how to take care of their feet That's right, DM patients only wash their feet every time they come home from traveling, cut their nails when they are long, use lotion if necessary, even 10 of them never use lotion because they think it is not necessary. Not important the use of footwear, only used when going out of the house and even often forgetting to use footwear, if there are wounds on the patient's feet, only apply red medicine without being covered by using a standard bandage and do not do routine health checks with health services or *Puskesmas*.

DM complications that often occur are problems in the lower limbs with diabetic ulcers by 15% and cause of amputation in patients with type 2 diabetes mellitus by 85%. In addition, every year more than one million people Diabetics have to amputate one of their lower limbs due to complications of diabetes. Putra, Soleman, & Arba, 2017). The results of the study revealed that the prevalence of diabetic foot ulcers (DFU) significantly globally is 6.3%, while the prevalence of DFU in Asia is 5.5% (Zhang, Lu, Jing, Tang, Zhu, & Bi, 2017). Study conducted by Siagian stated that the treatment of the feet of diabetics is focused on preventing and treat leg amputations. 90% of ulcers on the feet will heal if appropriate therapeutic management is carried out comprehensively and comprehensively in a multidisciplinary manner by reducing the burden on the feet, paying attention to injuries so that they always moist (moist), infection management, debridement, revascularization as indicated (Siagian, 2020).

Behavior is very involved in preventing complications of DM. Behavior is a complex process and it is influenced by several factors such as knowledge, self-confidence, attitudes, skills, motivation and social support. One of the determining factor in achieving a behavior is self-efficacy (self-confidence). Self-efficacy becomes something that It is important in managing DM which aims to make DM sufferers carry out self-care according to what they want recommended. The value of low self-efficacy / self-efficacy affects the compliance of self-care behavior (Isniyah, 2018).

Social support from the family is very influential in the self-care of diabetes mellitus patients. This is in line with research by Emilia that social assistance really helps type 2 DM patients to improve control against diabetes, because if social support is lacking it will have an impact on the low activity of DM patients who experience emotional stress due to prolonged treatment which causes irregularities in dietary habits and decreased frequency for foot examinations (Akoit, 2015).

There is a significant relationship between family social support and self-care in diabetic patients mellitus type 2 (Rembang, Katuuk, & Malara, 2017). There is a significant relationship between family social support with self-care behavior of type 2 DM clients in the work area of the Kaliwates Public Health Center, Jember Regency (Rahmadani, Rasni, & Nur, 2019).

Social support is very important in providing health education. Realizing this, the Republican Government Indonesia has launched a new policy and strategy in the "Health Insight Development Movement as a National Strategy Towards Healthy Indonesia 2010" on March 1, 1999. As other studies say that the results Research shows that social support can be considered as an effective factor in self-care behavior individuals, and by taking these factors into account in patient education, treatment and care programmes, can improve their self-care, in

Rita Sari[1]*, Faridah Hashim[2], Meram Azzani[2], Janu Purwono[1]

[1]Universitas Muhammadiyah Pringsewu
[2]MAHSA University Malaysia
*Corresponding author. E-mail: ritasari@umpril.ac.id

DOI: https://doi.org/10.33024/minh.v5i2.6436

addition to reducing economic costs, and improve their quality of life as well.

Social support can help remove barriers to providing optimal care for patients diabetes mellitus (Young, Shubrook, Valencerina, Wong, & Dugan, 2020). Social support is important in helping diabetic patients overcome their disease and improve medication adherence (Ramkisson, Pillay, & Sibanda, 2017).

RESEARCH METHOD

This study used a descriptive correlational design that revealed the correlation between variables related to recognizing the relationship between social support for diabetics and family behavior in foot care activities. This research was conducted in all public health centers in the working area Pringsewu Lampung-Indonesia in February – April 2021.

Sampling with purposive sampling technique. Total sample 107 respondents. The instrument used in this study was an original Spanish version translated into Bahasa Indonesia. The Social Support Questionnaire-Short Form (SSQ6S) questionnaire. The SSQ6S scale is a Likert scale with five continuum response options. The answer options available are: 1 = Strongly disagree, 2 = disagree, 3 = neutral, 4 = Agree, 5 Strongly agree (Sarason, Sarason, Sherin, & Pierce, 1987).

The minimum score of the respondent's answer choices in the SSQ6S section is a score of 1 to a maximum score of 5 for each question. The highest answer score is 55 and the lowest score is 11. Then the existing scores are categorized into 2, namely, a score of 28 is categorized as high social support, and below 27 is categorized as low social support. The measure of the foot care practice behavior scale for diabetes (FCBS) consisted of 17 questions (Pourhaji et al., 2016). The data was collected using a questionnaire addressed to all Type 2 DM patients at the Puskesmas. Inclusion criteria were: Patients with type 2 DM, health control at the Puskesmas, and aged 46-80 years. The analytical test used is the Chi-square test ($\alpha = 0.05$) with SPSS v-23.

Rita Sari[1]*, Faridah Hashim[2], Meram Azzani[2], Janu Purwono[1]

[1]Universitas Muhammadiyah Pringsewu
[2]MAHSA University Malaysia
*Corresponding author. E-mail: ritasari@umpril.ac.id

DOI: https://doi.org/10.33024/minh.v5i2.6436

RESULTS

Table 1. Demographic Characteristic of Respondents (N= 107)

Variables	Results
Age (Mean±SD) (Range) (Years)	**(58.79±5.973)(46-80)**
Gender (n/%)	
Female	85/79.4
Male	22/20.6
Ethnicity (n/%)	
Javanese	94/87.9
Lampung	11/10.3
Sundanese	2/1.9
Religion (n/%)	
Muslim	103/96.3
Non Muslim	4/3.7
Illness Duration (n/%)	
1 – 5 Years	22/20.6
6-10 Years	81/75.7
Over 10 Years	4/3.7
Level of Education (n/%)	
Elementary school	41/38.3
Junior high school	54/50.5
Senior high school	12/11.2
Occupation (n/%)	
Farmer	51/47.7
Housewife	45/42.1
Civil servant /Army/Police/Pensionary	7/6.5
Private	4/3.7

Table 1. Shows the characteristics of the respondents consisting of people with type II diabetes mellitus with an age range of 46 - 80 years with a mean and standard deviation (58.79±5.973). The majority are female (79.4%), Javanese

Rita Sari[1]*, Faridah Hashim[2], Meram Azzani[2], Janu Purwono[1]

[1]Universitas Muhammadiyah Pringsewu
[2]MAHSA University Malaysia
*Corresponding author. E-mail: ritasari@umpril.ac.id

DOI: https://doi.org/10.33024/minh.v5i2.6436

(87.9%) and Muslim (96.3%). Respondents with a length of illness of 6-10 years were (75.7%), most of the respondents had junior high school education (50.5%), and worked as farmers (47.7%).

Table 2. Relationship of The Family/Social Support and Diabetic Foot Care Practice.

Variabel	Diabetic Foot Care Practice		p-value	Odd Ratio
	Regularly (n=83	Irregularly (n=24)		
Family/Social Support (n/%)				
High	68/81.9	14/58.3	0.033	3.238
Low	15/18.1	10/41.7		(1.209-8.675)

Base on table 2 it is known that out of 82 respondents who received high social support; 81.9% diabetic foot care practice regularly and 58.3% diabetic foot care practice irregularly. The of 25 respondents who had low family/social support: 18.1% diabetic foot care practice regularly and 41.7% diabetic foot care practice irregularly.

The results of statistical tests using the chi square test with *p-value* = 0.033 (p <0.05), it can be concluded that there was significant relationship between of the family/social support and diabetic foot care practice.. The value *of the old ratio* = 3.238 This means that respondents have a 3,238 chance of performing foot care.

DISCUSSION

Characteristics of respondents

Age or age is the lifetime of the respondent expressed in years according to the respondent's statement. Gender is the gender of the respondent when conducting research. Education is an activity or learning process to develop or improve certain abilities so that the educational goals can stand alone. While the definition of work is the type of work respondent as a foundation to earn money (Notoadmodjo, 2003).

The results of the univariate analysis showed that the age range was 46 - 80 years with a mean and standard deviation (58.79±5.973), female gender (79.4%), Javanese (87.9) most ethnic group, Islam (96.3%).), the most education is junior high school (50.5%), farmer occupation (47.7%). Shows that people in the region Regency Pringsewu Diabetes Mellitus II were female , Javanese, Muslim, educated below junior high school and worked as a farmer.

The results of this study were mostly women. Referring to the opinion of Lueckenotte cit Sofiana (2011) women are more affected by diabetes than men, especially type 2 diabetes mellitus (Srimiyati, 2018). This is caused by a decrease in the production of the hormone estrogen, which maintains a balance in blood sugar levels and increases fat storage. The respondents of this study were in the age group above 55 years. Diabetes mellitus often occurs after the age of 40 years (Smeltzer, Bare, Hinkle, Cheever, Townsend, & Gould, 2010). With increasing age there will be impaired tolerance glucoseThe aging process also causes physiological changes that affect homeostasis. One of them is a change in the function of pancreatic beta cells. The degenerative process of beta cells will cause inadequacy in producing insulin and have an impact on increasing blood sugar levels.

Changes due to age such as vascular changes are associated with the occurrence of peripheral insulin resistance in type 2 diabetes. Decreased glucose intolerance affects the sensitivity of peripheral cells to insulin. This is what causes an increase in blood sugar levels in the elderly (Sundari, Harjanto, & Aulawi, 2001).

Age, level of education, having received health education about how to treat diabetic feet, and long suffering from DM. A person with a good level of education will be more mature towards the process of change within himself, so that it is easier to accept

Rita Sari[1]*, Faridah Hashim[2], Meram Azzani[2], Janu Purwono[1]

[1]Universitas Muhammadiyah Pringsewu
[2]MAHSA University Malaysia
*Corresponding author. E-mail: ritasari@umpril.ac.id

DOI: https://doi.org/10.33024/minh.v5i2.6436

positive, objective, and open external input. information about the disease (DEVI, 2020).

The results of this study are mostly lower secondary education. Someone with secondary education, has the ability to receive, process information well. A person's educational background affects the ability to understand objects and information. Referring to Notoatmodjo's concept that the higher the education, the easier it is to receiveand process information (Notoatmodjo, 2012).

Based on the description above, it can be concluded that the people in the Puskesmas area in Pringsewu Regency who perform foot care are female, age with mean and standard deviation (58.79±5.973), educated below junior high school and work as a farmer.

Family/Social Support

The results showed an increase in social support after the implementation of Health Education about foot care in respondents with diabetes mellitus. High percentage of social support before implementation Health education is (29.9%) and after health education is (76.6%). Percentage of social support which was low before the implementation of Health Education was (70.1%) and after health education was (23.4%).

Social support is defined as assistance received from others that allows for well-being support recipient. Social support is very helpful for people with type 2 diabetes to improve diabetes control, because Indonesian characters always need support from others, especially when they are sick. Lack of Social support has an impact on decreasing the activity of DM patients, the greater the emotional stress, disorder diet and decreased frequency of foot examinations (Donsu, Hadjam, Asdie, & Hidayat, 2014).

Sarason said that social support is the presence, willingness, care of people who can dependable, respect and love us (Kumalasari, & Ahyani, 2012), whereas according to Gottlieb social support Operational is social support consisting of verbal or non-verbal information. or advice. provided by network familiar (Khalid, 2011).

Several research results show that social support is very important and affects well-being people with type 2 diabetes. Social support is very helpful for people with type 2 diabetes to improve diabetes control. Lack of social support has an impact on decreased activity of diabetics, greater emotional stress, dietary irregularities and decreased frequency of foot examinations (Goetz, Szecsenyi, Campbell, Rosemann, Rueter, Raum, & Miksch, 2012).

DM clients with good psychosocial conditions will be able to carry out self-care activities well so that able to control blood sugar levels. Type 2 DM clients are expected to be able to adapt to their diabetes so that not experiencing anxiety and depression so that they are able to carry out good self-care and lower blood sugar levels well controlled (Simamora, 2016).

Other studies have shown that there is a significant relationship between social support and self-efficacy with self-care behavior in people with type 2 diabetes. Social support is one of the most contribute to self-care behavior for people with type 2 diabetes. It is important to involve the family as care support providers so that in carrying out self-care activities people with type 2 diabetes remain motivated high (Akoit, 2015).

There is a significant relationship between family social support and self-care in type diabetes mellitus patients 2 at the Internal Medicine Poly Hospital of Mokopido Toli-Toli (Rembang, VP, Katuuk, & Malara, 2017) and there is also a relationship between family support with foot care to prevent diabetic foot in type 2 DM patients at Ungaran Hospital with (p value = 0.001 < 0.05) (Ismonah, & Octaviani, 2019).

This study also argues that in the presence of social support (informational, emotional and instrumental), the ability of people with type 2 diabetes to perform self-care activities increases (Naderimagham et al, 2012).

Rita Sari[1]*, Faridah Hashim[2], Meram Azzani[2], Janu Purwono[1]

[1]Universitas Muhammadiyah Pringsewu
[2]MAHSA University Malaysia
*Corresponding author. E-mail: ritasari@umpril.ac.id

DOI: https://doi.org/10.33024/minh.v5i2.6436

CONCLUSION

High social support in respondents with type 2 diabetes mellitus can prevent diabetic foot ulcers.

REFERENCES

Akoit, E.E. (2015). Social support and self-care behavior of people with type 2 diabetes mellitus. *Journal of Health Info* , *13* (2), 952-966.

Devi, M.S.L. (2020). *The Relationship between Perception of Disease and Self-Efficacy in Patients with Type 2 Diabetes Mellitus in the Outpatient Clinic In Level III Hospital Baladhika Husada Jember* (Doctoral dissertation, Faculty of Nursing)

Donsu, J.D, Hadjam, M.N.R, Asdie, A.H, & Hidayat, R. (2014). The role of psychological factors in depression in patients with mellitus type 2 *Journal of Psychology UGM*, *41*(2), 241-249.

Goetz, K., Szecsenyi, J., Campbell, S., Rosemann, T., Rueter, G., Raum, E., & Miksch, A. (2012). The importance of support social care for people with type 2 diabetes—a qualitative study with general practitioners, practice nurses and patients. *GMS Psycho-Social-Medicine* , *9* .

Hariyono, H., & Sababa, O.N. (2018). Diabetes self-management education on the independence of type 2 DM patients in manage diet. *Indonesian Journal of Nursing Education and Clinics (INJEC)* , *2* (1), 48-51.

International Diabetes Federation, (2015). International Diabetes Federation Diabetes Atlas 7th edition.

International Diabetes Federation. (2017). *IDF Diabetes Atlas*. 8th Edition 2017. Accessed from: https://www.idf.org/e library/epidemiology-research/diabetes-atlas/134-idf-diabetes-atlas-8th-edition.html.

Ismonah, I., & Octaviani, A.P. (2019). Relationship of family support to foot care to prevent diabetic foot in type 2 DM patients at the Ungaran Hospital. *Kosala: Journal of Health Sciences* , *7* (2), 97-102.

Isniyah, F. (2018). The relationship between depression and self-efficacy in type 2 diabetes mellitus (DM) patients in the work area Puger Public Health Center, Jember Regency.

Khalid, I. (2011). The effect of self-esteem and social support on the life optimism of people living with HIV/AIDS.

Kumalasari, F., & Ahyani, L.N. (2012). The relationship between social support and adolescent adjustment in the orphanage care. *Journal of Psychology: Pitutur*, *1*(1), 19-28.

Ministry of Health Republic of Indonesia. (2018). Riskesdas: *angka kejadian 10 penyakit di indonesia*. Retrieved from https://www.litbang.kemkes.go.id/laporan-riset-kesehatan-dasar-riskesdas

Notoatmodjo, S. (2012). Health promotion and health behavior.

Ogurtsova, K., da Rocha Fernandes, J.D, Huang, Y., Linnenkamp, U., Guariguata, L., Cho, N.H, & Makaroff, L.E. (2017). IDF Diabetes Atlas: Global estimates for the prevalence of diabetes for 2015 and 2040. *Diabetes research and clinical practice*, *128*, 40-50.

Primanda, Y., Putra, P.B, Soleman, S.R, & Arba, W.M. (2017). Effect of foot care education program on knowledge and self-efficacy in families of diabetes mellitus patients at PKU Muhammadiyah Gamping Yogyakarta Indonesia. *Advanced Science Letters* , *23* (12), 12619-12622.

Rita Sari[1]*, Faridah Hashim[2], Meram Azzani[2], Janu Purwono[1]

[1]Universitas Muhammadiyah Pringsewu
[2]MAHSA University Malaysia
*Corresponding author. E-mail: ritasari@umpril.ac.id

DOI: https://doi.org/10.33024/minh.v5i2.6436

Rahmadani, W., Rasni, H., & Nur, K.R.M. (2019). The relationship between family social support and self-care behavior in clients with type 2 diabetes mellitus in the work area of Kaliwates Public Health Center, Jember. *Health Library*, *7*(2), 120-126.

Ramkisson, S., Pillay, B.J, & Sibanda, W. (2017). Social support and coping in adults with type diabetes 2. *African Journal of Primary Health Care and Family Medicine* , *9* (1), 1-8.

Rembang, V.P, Katuuk, M., & Malara, R. (2017). Relationship of social support and motivation with self-care in patients with type 2 diabetes mellitus in the internal medicine polyclinic of Mokopido Hospital Toli-Toli. *Journal of nursing* , *5* (1).

Siagian, Y.T.E. (2020). The effect of health education on the knowledge and attitudes of diabetes mellitus patients in wound healing process clinic Asri Wound Care Center Medan

Simamora, F.A. (2016). Correlation between anxiety, depression, and social support with clients' self-care activities diabetes mellitus type 2. *Indonesian Health Scientific Journal*, *1*(2), 43-48.

Smeltzer, S.C, Bare, B.G, Hinkle, J.L, Cheever, K.H, Townsend, M.C, & Gould, B. (2008). *Medical nursing textbook Brunner and Suddarth surgery 10th edition* . Philadelphia: Lippincott Williams & Wilkins.

Srimiyati, S. (2018). Knowledge of prevention of diabetic feet in patients with diabetes mellitus affects foot care. Designing, 16(2), 76-82.

Sundari, A., Harjanto, D., & Aulawi, K. (2009). An Overview of Knowledge Levels About Diabetic Ulcers and Foot Care in Patients with Type 2 Diabetes Mellitus. *Journal of Nursing UGM*, *4*(3), 181-190.

Young, C.F, Shubrook, J.H, Valencerina, E., Wong, S., Lo, S.N.H, & Dugan, J.A. (2020). Association between social support and diabetes-related pressure in people with type 2 diabetes mellitus. *Journal of Osteopathic* , *120* (11), 721-731.

Zhang, P., Lu, J., Jing, Y., Tang, S., Zhu, D., & Bi, Y. (2017). Global epidemiology of diabetic foot ulceration: a systematic review and meta-analysis. *History of medicine* , *49* (2), 106-116.

Rita Sari[1]*, Faridah Hashim[2], Meram Azzani[2], Janu Purwono[1]

[1]Universitas Muhammadiyah Pringsewu
[2]MAHSA University Malaysia
*Corresponding author. E-mail: ritasari@umpril.ac.id

DOI: https://doi.org/10.33024/minh.v5i2.6436

The family/social support and impact on diabetic foot care practice

ORIGINALITY REPORT

21%
SIMILARITY INDEX

PRIMARY SOURCES

1	ejurnalmalahayati.ac.id Internet	683 words — 21%

EXCLUDE QUOTES	ON	EXCLUDE SOURCES	< 10%
EXCLUDE BIBLIOGRAPHY	ON	EXCLUDE MATCHES	< 10 WORDS