

# Relationship between Self Care and Quality of Life for Pregnant Women with Diabetes Mellitus Patients

Hastuti<sup>1</sup>, Afrina Januarista<sup>2</sup>, Nelky Suriawanto<sup>3</sup>

<sup>1, 2, 3</sup>STIKES Widya Nusantara Palu, Jl, Untad I, Tondo, Mantikulore, Palu City, Central Sulawesi 94148, Indonesia

## ARTICLE INFO

### Keywords:

Self Care,  
Quality of Life,  
Diabetic Mellitus

## ABSTRACT

Diabetic mellitus is the disease signed by increasing of blood sugar levels and could be immediately be cured instantly but need self care. Self care is individual planning action in controlling the disease to improve the health and life quality. The aims of this research to analyze the correlation between self care and life quality of diabetes mellitus patients in Garuda Ward of Anutapura General Hospital Palu. This is quantitative research it used analysis design with cross sectional approaching. Data is taken by using questions of summary of self care (SDSCA) and diabetes quality of life (DQOL) and samples taken by total sampling technique. The population number was 30 respondents and used univariate and bivariate analyzes with chi-square tests. Result found that more respondents have good self care (70%) with good quality of life (73.3%) and chi-square test result that p value = 0.003 (p value < 0.05) it means statistically having correlation between self care and quality of life. Conclusion that having a correlation between self care with quality of life diabetes mellitus patient in Garuda Ward of Anutapura General Hospital Palu. Patient diabetes mellitus expected could improve the self care at the age of increasing quality of life, health state and prevent the further complication.

### E-mail:

[hastuti02.201401015@gmail.com](mailto:hastuti02.201401015@gmail.com)

Copyright © 2018 Science Midwifery

## 1. Introduction

Effective insulin deficiency in the body causes diabetes mellitus. Diabetes is characterized by dysfunction of metabolism of fat, carbohydrates, proteins, insulin, function and structure of blood and nerve vessels. Diabetes mellitus is a chronic disease that requires medical treatment, education about self care and ongoing support to prevent acute or chronic complications from the American Diabetes Association [1].

Diabetes mellitus can cause various kinds of impacts and social life. DM patients will be disturbed if the wound has spread. This impact will have a major influence on the quality of life of DM patients. Quality of life is a feeling of satisfaction and happiness so that patients with diabetes mellitus can carry out their daily lives properly. There are several aspects that can affect the quality of life. These aspects are the ongoing special needs in the treatment of DM, symptoms that may arise when blood sugar levels are unstable, complications that can result from diabetes and sexual dysfunction [2]. Decreased quality of life in patients with Diabetes Mellitus is followed by the inability of these patients to perform self-care independently, which is usually called self care. The inability of diabetes mellitus patients to perform self care can affect the quality of life in terms of physical health, psychological well-being, social relations, and relationships with the environment. Self care that is carried out in people with diabetes mellitus is more focused on preventing complications and controlling blood sugar. If self care is done well, it can indirectly improve the quality of life of patients with diabetes mellitus so that they can carry out normal daily activities [3]. psychological well-being, social relationships, and relationships with the environment. Self care that is carried out in people with diabetes mellitus is more focused on preventing complications and controlling blood sugar. If self care is done well, it can indirectly improve the quality of life of patients with diabetes mellitus so that they can carry out normal daily activities [3]. psychological well-being, social relationships, and relationships with the environment. Self care that is carried out in people with diabetes mellitus is more focused on preventing complications and controlling blood sugar. If self care is done well, it can indirectly improve the quality of life of patients with diabetes mellitus so that they can carry out normal daily activities [3].

Self care can improve human development in social groups that are in line with human potential, know human limitations, and human desire to be normal. Self care that is done well will improve the quality of life of these patients. Conversely, self care that is done poorly will have a negative impact on the quality of life of patients with diabetes mellitus [4]. Diabetes mellitus (DM) is

a group of metabolic diseases characterized by hyperglycemia that occurs due to abnormal insulin secretion, insulin action, or both. Common symptoms of diabetes mellitus are polyuria, polyphagia, polydipsia. Classifications of diabetes mellitus are Type 1 Diabetes Mellitus, Type 2 Diabetes Mellitus, Gestational Type Diabetes Mellitus, and Other Type Diabetes Mellitus.

Based on morbidity the prevalence of DM in Indonesia in 2013 was 2.1%. This figure is higher compared to 2007 (1.1%). A total of 31 provinces (93.3%) showed a significant increase in the prevalence of DM. The results of Riskesdes in 2013 stated that the highest prevalence of DM sufferers was at the age of  $\geq 15$  years. In each province in Indonesia, Central Sulawesi (3.7%), then North Sulawesi (3.6%) and South Sulawesi (3.4%). While the lowest were in Lampung Province (0.8%), then Bengkulu and West Kalimantan (1.0%). The province with the highest prevalence increase was South Sulawesi Province, which was 0.8% in 2007 to 3.4% in 2013. While the province with the highest prevalence decrease was West Papua, which was 1.4% in 2007 to 1,

Data on morbidity of inpatients with a diagnosis of DM in Anutapura General Hospital in Palu, the number of DM patients in 2016 was 580 patients, with the number of male patients 226 and the number of female patients 354, the number of out-of-living patients was 547 while the out-patient died was 33. Whereas in 2017 inpatients with a diagnosis of DM in Anutapura General Hospital Palu decreased with the number of patients 564, with the number of male patients 232 and the number of female patients 332, with the number of patients out of life 532 while the number of patients out of death was 32 people. From these data it can be concluded that since 2016-2017 the high morbidity of patients with a diagnosis of DM.

Based on observational studies the results of self care support for sufferers of chronic diseases such as DM states that when the findings from individual studies are put together, overall evidence suggests that self care support can be useful for one's behavior and habits, quality of life, clinical symptoms, and use of facilities health services. Patient knowledge about self care DM is still relatively low so that this can affect the quality of life of DM American Diabetes Association patients [1].

The results of a preliminary survey conducted by researchers in February 2018 of patients with diabetes mellitus, there are some patients who do not know exactly how to do self care diabetes mellitus, and nurses are still lacking in providing health education about self care so that patient knowledge about quality of life is still very low. Based on data that states that self care is one program that can improve the quality of life of patients. For this reason, researchers are interested in conducting research on "The Relationship of Self Care with the Quality of Life of Diabetes Mellitus Patients in Garuda Room Anutapura Hospital Palu" ..

## 2. Method

This research uses quantitative research. The design used in this study is analytic with cross sectional approach. Cross-sectional aims to identify dependent variables and independent variables that are carried out simultaneously using questionnaires.

This research was carried out in the Garuda Room of Anutapura Hospital, Palu, carried out on June 1 - June 7, 2018. The sample collection technique used was probability sampling with the totalsampling approach. The number of samples in this study were 30 respondents. Bivariate analysis in this study aims to find the relationship of independent variables to the dependent variable. To know the relationship of self care with the quality of life of patients with diabetes mellitus using the Chi-Square Test with a value of 95% confidence level.

## 3. Research and Analysis Results

**Table 1**  
Characteristics of Respondents

Gender	Frequency	Percentage(%)
Male	12	40
women	18	60
Age	Frequency	Percentage(%)
31-40 years old	1	3.3
41-50 years old	7	23.3
51-60 years old	19	63.3
61-70 years old	3	10

education	Frequency	Percentage(%)
Elementary school	12	40
Middle School	6	20
High school	9	30
PT	3	10
Profession	Frequency	Percentage(%)
Does not work	2	6.7
entrepreneur	12	40
Farmers	13	43.3
Pension	3	10
Long suffered from DM	Frequency	Percentage(%)
<2 years	16	53.3
> 2 years	14	46.7

Table 1 shows a description of the characteristics of respondents based on gender, age, education, occupation, and duration of diabetes in patients with diabetes mellitus in the Garuda Anutapura General Hospital, Palu. Based on gender in this study, from 30 respondents, the results were mostly female, namely 60% and a small proportion were male, namely 40%. Based on age according to RI Ministry of Health; 2009) from 30 respondents obtained the results of the majority of respondents aged 51-60 years which is 63.3% and a small portion aged 31-40 years 3.3% .. Based on the education in this study of the 30 respondents obtained the majority of elementary school (elementary school) education ie 40% and a small portion of PT is 10%. Based on the type of work in this study of 30 respondents found that most of the work as farmers is 43.3% and a small portion does not work, 10%. Based on the duration of DM sufferers in this study, from 30 respondents it was found that the majority of sufferers had DM <2 years ie 53.3%) and a small portion had suffered DM> 2 years by 46.7%.

**Table 2**

Frequency distribution of respondents based on self care with the quality of life of patients with diabetes mellitus

Self care	Frequency	Percentage (%)
Good	17	56.7
Not good	13	43.3
<b>Total</b>	<b>30</b>	<b>100%</b>
Quality of life	Frequency	Percentage (%)
Good	17	56.7
Not good	13	43.3
<b>Total</b>	<b>30</b>	<b>100%</b>

Table 2 shows the frequency distribution of respondents based on the level of self-care of patients with diabetes mellitus in the Garuda Room of Anutapura Hospital, Palu. Based on patient self care, the results showed that of the 30 respondents in this study most of the respondents had good self care that is 56.7% and a small proportion of respondents who had poor self care was 43.3%. Based on the quality of life of patients, the results showed that of the 30 respondents in this study most of the respondents had a good quality of life that was 56.7% and a small proportion of respondents who had poor quality of life was 43.3%.

**Table 3**

Chi-square statistical test

Self Care	Quality of life				Total l	Value
	Good		Not good			
	f	%	F	%		
Good	12	70.5	5	29.4	17	
Not good	5	38.4	8	61.5	13	0.003
Total	17	56.7	13	43.3	30	

Table 3 shows the results of the chi square test which showed that of the 30 respondents in this study 17 respondents who had good self care were 70.5% of respondents who had a good quality of life and 29.4% of respondents had a poor quality of life. while 13 respondents who have poor self-care there are 38.4% who have good quality of life and 29.4% of respondents have poor quality of

life. the statistical test results with the chi square test there is 1 cell that has a frequency of expectations or also called the expected count test that is ( $p\text{-value} < 0.05$ ) then  $H_a$  is accepted which means there is a relationship or correlation that is directly proportional between self care with the quality of life of patients with diabetes melitus in the garuda room of Anutapura Public Hospital in Palu.

#### **a. Self care Diabetes Mellitus patients in Garuda Room Anutapura Hospital, Palu**

Based on the results of self care research in the surgical treatment room (Upper Garuda and Lower Garuda) Anutapura Hospital, Palu, from 30 respondents it was found that respondents who had good self care were 17 respondents (56.7%), compared to those who had poor self care namely 13 respondents (43.3%). Based on the results of research conducted in the Garuda Room of Anutapura Hospital, Palu, there are several factors that influence including the education level group, the most in the primary education group of 12 respondents as many as 6 respondents have poor self care (20%), most have self care which is not good because the knowledge gained is still very lacking. The level of education of a person or individual will affect the ability to think and perform self-care,

According to self care researchers influenced by several characteristics of respondents, namely in the old group suffering from diabetes, more respondents who suffered  $< 2$  years, namely 53.3%. while respondents with a long time of suffering  $> 2$  years 14 respondents were 46.7%. Long suffering from DM is one of the causes that affects Self Care DM patients because a person suffering from DM  $< 2$  years then self care is still lacking because the knowledge gained about DM care is still lacking. However, patients with  $> 2$  years of self-care are better because they often have information about how to treat DM well.

According to researchers, most respondents have good self care, this is supported by the way the diet / diet carried out by respondents is quite good by doing a diet according to the doctor's recommendations and taking medication regularly and monitoring blood sugar regularly. The results of this study are in line with Inge where it is found that more respondents have good self care compared to poor self care. Equivalent to Sulistria's research, the results of the self care level obtained from 25 inpatient respondents at Kalirungkut Hospital in Surabaya were mostly good self care due to their way of eating according to the doctor's advice and taking medication / injecting regular insulin and controlling blood sugar [8]

#### **b. Quality of Life for Diabetes Mellitus Patients in Garuda Room Anutapura Hospital Palu**

Based on the results of the study the quality of life of patients with diabetes at the surgical treatment room (Upper Garuda and Lower Garuda) Anutapura General Hospital, Palu, from 30 respondents it was found that respondents who had a good quality of life more than 17 respondents (56.7%), compared to those who had quality life is not good that is 13 respondents (43.3%). Based on the results of the study of the quality of life of patients Diabetes Mellitus in the surgical treatment room (Upper Garuda and Lower Garuda) Anutapura Hospital, Palu, from 30 respondents it is known that respondents who have a good quality of life more than 17 respondents (56.7%), compared to those who have quality life is not good that is 13 respondents (43.3%). This study is in line with that conducted by Inge, the results obtained are that more respondents have a good quality of life [7].

According to researchers most of the respondents who have a good quality of life because they mostly understand the care of people with DM so they get a good quality of life. Respondents with good quality of life have good psychosocial well. Quality of life is influenced by several factors including physical function, psychological function, social function and spiritual function. The psychological condition of DM patients is also closely related to the cognitive and emotional aspects of coping strategies for disease (strategic illness coping), which will indirectly affect the habit of seeking medication. Assessment or subjective awareness of DM patients that they are able to carry out these life attitudes is a sign that patients will adhere to the treatment given and will affect the quality of life of patients [7]. According to Polonsky quality of life is an individual's feelings about his health and well-being which includes physical function, psychological function and social function. Quality of life can be interpreted as the degree of an individual in enjoying his life which consists of satisfaction and the impact felt by an individual in carrying out his daily life [9].

According to researchers there are several factors that affect the quality of life based on the characteristics of respondents, namely gender. In the characteristics of respondents, most respondents were female, namely 18 respondents (60%). More women than men because women have more fat levels and there is a rapid increase in BB than men and women rarely exercise so that

women are more at risk of developing DM than men. This study is in line with the research of Tamara (2014), which states that more women experience DM due to a decrease in estrogen hormones due to menopause so that women are more susceptible to DM. There are more women than men because there are more women in Indonesia than men [10].

According to researchers there are some respondents who have a poor quality of life. This is because some respondents still lack knowledge about DM. This is supported in terms of education where more DM sufferers have primary school education. Here you can see that someone with low education still lacks understanding of how to achieve a good quality of life and that irregular treatment and exercise are performed. This study is in line with Inge who stated that the average respondent felt his life was not good so they did not pay attention to the medication given and the recommended exercise [7]. One of the causes of the quality of life of DM patients is not good because of the physical changes experienced by patients with diabetes mellitus.

The results of research conducted by researchers on the quality of life of respondents who suffer from Diabetes Mellitus in the Garuda Room Anutapura Hospital Palu by using the The Diabetes Diabetes of Life questionnaire. The quality of life questionnaire consisted of how often and satisfaction. The results obtained by researchers are, from statements about the satisfaction of respondents with diabetes mellitus he suffered, statements that many have very satisfied answers are statements about diabetes care at this time and very often the length of time used in the treatment of diabetes. Researchers also find that quality of life is also affected by age because the higher the age the more the quality of life decreases [9].

The solution that can be given to patients suffering from diabetes mellitus caused by gender and obesity is that respondents are expected to be able to change their lifestyle and be diligent in exercising to improve a better quality of life and maintain their diet, take regular medication [11].

#### **c. The Relationship between Self Care and Quality of Life of Diabetes Mellitus Patients in Garuda Room, Anutapura Hospital, Palu**

Based on the results of bivariate analysis, the relationship between self-care and the quality of life of DM patients was obtained that more respondents had good self-care who had good quality of life for 17 respondents, compared with respondents who had good quality of life as many as 13 respondents. Statistical test results obtained  $p$  value = 0.003 ( $p$  value  $< 0.05$ ) this shows there is a relationship between self care and quality of life.

The results of this study are in line with research conducted by Inge, where a known significant value ( $p$ ) of 0,000 means  $0,000 < 0.05$  so that  $H_0$  is rejected and  $H_a$  is accepted. So it can be concluded that there is a significant relationship between self care with the quality of life of DM patients. As for the correlation coefficient ( $r$ ), the result is 0.601 with a positive value. These results can be concluded that there is a relationship or correlation that is directly proportional between self caring with quality of life. This study has a moderate level of correlation. The level of correlation is due to several factors that affect the quality of life in patients with diabetes mellitus, namely age, sex, and duration of diabetes mellitus [7].

According to researchers, most respondents have good self care, there are (56.6%) respondents and have a poor quality of life, namely 13 respondents (43.3%). This is caused by several intermediate factors, namely the level of education greatly influences knowledge. Respondents with low education are still lacking of knowledge about how to care for themselves with DM to improve quality of life. Someone who has good self care can improve the quality of life as well. It can be concluded that there is a significant relationship between self care and the quality of life of DM patients. The results of this study are in line with research conducted by Soewondo and Subekti at the Tanah Kalikedinding Health Center in 2014, stating that self care is significantly related to the quality of life of DM sufferers at the Kalikedinding Health Center with a result of  $p = 0,000$  ( $p < 0.05$ ). the strength of a strong category relationship is obtained by  $\text{Cramer's } v = 0.580$ .  $\text{Cramer's } v$  is used to determine the strength of the relationship between two variables. Where self care is good quality of life is good. Self care can improve the quality of life by regulating one's psychological processes and facilitating one's behavior [12]  $\text{sv}$  is used to determine the strength of the relationship between two variables. Where self care is good quality of life is good. Self care can improve the quality of life by regulating one's psychological processes and facilitating one's behavior [12]  $\text{sv}$  is used to determine the strength of the relationship between two variables. Where self care is good quality of life is good. Self care can improve the quality of life by regulating one's psychological processes and facilitating one's behavior [12]



In Tamara research conducted at Arifin Achmad Regional Hospital in Riau Province also stated that there was a relationship between self care and quality of life in Arifin Achmad Regional Hospital in Riau Province with the result of  $p = 0.030$  ( $p < 0.05$ ). Self care that is carried out regularly in the form of encouragement to control their health to the hospital and motivate themselves to treat DM sufferers in treating their illnesses so that self care is very important to be able to improve the quality of life of DM sufferers [10].

The results of the study that researchers found there are several factors that affect self care with the quality of life of DM patients, one of which is age, researchers get the age of respondents who suffer from diabetes mellitus in the range of 51-60 years. Age in the range of 51-60 years is the beginning of an individual entering the age of the elderly. At that age the body has begun to decline. The decline that began to occur was a decrease in the work of the pancreatic hormone in producing insulin and resulted in an increase in blood sugar levels. So that at this age an individual tends to experience a decrease in quality of life. This study is in line with research conducted by Tamara which states that age greatly affects self care with the quality of life of patients.

The results of the study that researchers get is for the gender that researchers get is the majority of respondents male sex. This is because men have factors that can cause diabetes mellitus such as rarely pay attention to eating patterns, often smoking, not paying attention to their health and often stress. This study is the same as Tamara's study which states that gender strongly influences the occurrence of diabetes, found that all types of melamine are very much affected by DM [10].

The results of the study that researchers get are for long suffering from diabetes mellitus researchers get the results that all respondents had suffered from diabetes mellitus for  $< 2$  years. Patients with diabetes mellitus who have diabetes mellitus  $< 2$  years old need adjustment to the disease they suffer. Diabetes mellitus is a chronic disease and lasts a long time, making this disease requires adjustment in carrying out daily activities. So that patients with diabetes mellitus  $< 2$  years, tend not to be ready in carrying out their lives as sufferers of diabetes mellitus and decreased quality of life.

Rudijanto's research also states that there is a significant relationship between the relationship of self care with the quality of life of people with DM with a  $p$  value of 0.001 ( $p < 0.05$ ). Self care is good, the quality of life will be good too because the increase in one domain of self care will improve the quality of life as well [13].

The solution for people with diabetes mellitus is expected to always pay attention to lifestyle, always plan a diet / diet, exercise regularly, take medication according to the doctor's recommendations and regularly monitor blood sugar. The goal is to achieve good self care and achieve a good quality of life and be open to the community, be active in the family and social environment and be able to accept physical and psychological conditions well. DM sufferers in addition to performing routine self-care must be balanced by diligently worshiping and getting closer to God, so that achieving quality of life increases.

#### 4. Conclusion

The conclusion in this study is that there is a relationship between self care with the quality of life of pregnant women with diabetes mellitus patients

#### References

- American Diabetes Association. 'Diagnosis and Clasification of Diabetes Mellitus'. Retrieved from Diabetes Care. 2014. 35(1), pp.S64-S71.
- Alfiyah, 'Hubungan Dukungan Keluarga Dan Pengendalian Kadar Gula Darah Dengan Gejala Komplikasi Mikrovaskular', Jurnal Berkala Epidemiologi. Vol. 23 ( 2), pp. 1-4. 2014.
- Kusniawati, "Analisis Faktor yang Berkotribusi terhadap Self Care Diabetes pada Klien Diabetes Melitus Tipe 2 di Rumah Sakit Umum Tangerang". Fakultas Ilmu Kesehatan, Universitas Indonesia. Tangerang. 2013.
- Lennon H. Sheila W, "Self Care Programmes For People Desease Cronic: A Systematic Review. Article Of Clinical Rehabilitation". Medika Salemba. Jakarta. 2013.
- Kementrian Kesehatan Republik Indonesia. Kesehatan Dasar. Angka kejadian Diabetes Melitus. Provinsi Sumatra Barat. 2013.

## Science Midwifery

journal homepage: [www.midwifery.iocspublisher.org](http://www.midwifery.iocspublisher.org)

- Sigurdadottir AK. "Self care in diabetes: model of factors AffectingSelf Care". Jurnal Of Clinical Nursing. Vol. 12(2). Pp.301-314. 2015.
- Inge RS, Putu S, Marylin M. "Hubungan Self Care Diabetes Dengan Kualitas Hidup Pasien DM Tipe 2 Di Poliklinik Interna Rumah Sakit Umum Daerah Badung". Jurnal Keperawatan Medikal Bedah. Vol. 30 (12) pp. 1-7. 2013.
- Sulistria YM. "Tingkat Self Care Pasien Rawat Jalan Diabetes Melitus Tipe 2 di Puskesmas Kalirungkut Surabaya". Jurnal Ilmiah Mahasiswa UniversitasSurabaya. Vol. 21(5). pp. 1-11. 2013.
- Polonsky SA. "Hubungan tingkat Self Care dengan kejadian komplikasi pada pasien DM diruang rawat inap RSUD". Jurnal Keperawatan Fakultas Keperawatan Universitas Pandjajaran. Vol. 2(12). pp. 1-15. 2014.
- Tamara SA. Buku Ajar Penyakit Dalam. Medika Salemba. Jakarta. 2014.
- Tanto C, Liwang F, Hanifati S. Kapita Salekta Kedokteran. Medika Aesculapius. Jakarta. 2016.
- Soewondo P, Subekti I. Penatalaksanaan Diabetes Melitus Terpadu. ED 2. Balai Penerbit FKUI. Jakarta. 2013.
- Rudijanto A. Pengelolaan Dan Pencegahan Diabetes Melitus Di Indonesia. PB PERKENI. Jakarta. 2015.