

Factors Associated With Patient Satisfaction In Diabetes Mellitus Outpatient In General Hospital of PKU Muhammadiyah Purbalingga

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ABSTRACT

Diabetes Mellitus (DM) is a world wide health problems which requires long-term treatment. Non- adherent diabetes mellitus patient is associated with a worsening condition. Factor that can affect medication adherence in diabetes mellitus patient is patient satisfaction. This research is a quantitative research with analytical observation and cross-sectional method, aims to determine the factors associated with patient's satisfaction of diabetes mellitus outpatients in General Hospital PKU Muhammadiyah Purbalingga. The patient's satisfaction level of diabetes mellitus outpatient in General Hospital PKU Muhammadiyah Purbalingga is very high (39,2%). From this research the factors that significantly associated with patient's satisfaction are age, education level, and duration of diabetes mellitus. While other factors like sex, occupation, marital status, and income level was not associated with patient's satisfaction

Keyword: Patient Satisfaction; Diabetes Mellitus; Medication Adherence

1. Introduction

Diabetes Mellitus (DM) is a worldwide health problems which requires long-term medical care and self- management to prevent both short- term and long-term complications. The International Diabetes Federation predicts an increase in diabetes mellitus cases in Indonesia from 10.7 million cases in 2019, to 13.7 million cases in 2030. Diabetes Mellitus (DM) is a condition where blood sugar level is high and characterized by polydipsia, polyuria, and polyphagia. PERKENI, Indonesian Endocrinology Association states that there are five pillars of diabetes mellitus management, they are health education, diabetes diet therapy, physical exercise, pharmacological therapy, and monitoring blood sugar.

In general, adherence to medication for chronic disease is a major challenge for health professionals. Non- adherent diabetes mellitus patient is associated with a worsening condition, including poor sugar control, number of complications, and cost-inefficiency. Factor that can affect the level of medication adherence, including patient satisfaction.

Satisfaction is a person’s perception of pleasure or disappointment that arise after comparing the results of existing conditions to the expected conditions. Hospital is a place that provide health service. Health services aim to increasethe degree of patient’shealth which fullfill patient’s satisfactionby providing excellent service. The factors that affect the level of satisfaction in diabetes mellitus patients include sociodemographic factors (age, sex, occupation, marital status, education level, and income level) and duration of the disease. Patient’s satisfaction with health services has a significant relationship with medication adherence in diabetes mellitus patients in Indonesia ($p = 0.019$). The higher the level of patient’s satisfaction, it will increase adherence to the treatment.

2. Research Methodology

This research is a quantitative research with analytical observation aims to determine the factors associatedwith patient’s satisfaction in diabetes mellitus outpatients. This research was conducted by taking respondents' data directly through interviews and filling out questionnaires. This study uses a cross-sectional method where data is taken at one time. This research was conducted at the Outpatient Service of General Hospital PKU Muhammadiyah Purbalingga in September 2022. The sample in this study was counted by *slovin* formula below :

$$n = \frac{N}{1 + Ne^2}$$

Where N = population = 124 patients

$e = \text{error tolerance/margin of error} = 10\%$

So, $n = 124 : (1+124(0,1)^2) = 124 : 2,24$
 $= 56$ patients

In this research, patient’s satisfaction would be assesed by a modified Patient Satisfaction Questionnaire Short-Form (PSQ-18) questionnaire called KuisiонерKepuasan Pasien-2017 (KKP-2017). This questionnaire has been tested and validated by Imaninda (2016) and the category of patient’ssatisfaction is divided into five categories, these are : a). Very low (score < 20); b). Low (20 -27); c. Moderate (27 -34); d. High (35- 41); and e. Very high (score> 41). Then the hypothesis test was carried out on the research variables.

3. Results

3.1 Respondents’ Characteristics

This research was conducted by conducting a survey to the diabetes mellitus outpatient in General Hospital PKU Muhammadiyah Purbalingga. Data was collected by conducting interviews based on questionnaires. There were 56 samples in this research. Based on the results of interviews conducted, the following are the characteristics of the respondents presented in the following tables:

Table 3.1. Respondent's Characteristics

Variables	Cases	Percentage
Age		
<60 years old	37	66%
≥ 60 years old	19	34%
Sex		
Male	26	46%
Female	30	54%
Occupation		
Employed	34	61%
Unemployed	22	39%
Marital Status		
Married	46	82%
Unmarried	10	18%
Income Level		
Above UMK	34	61%
Under UMK	22	39%
Education Level		
High	22	39%
Low	34	61%
Duration of Diabetes Mellitus		
<5 years	39	70%
≥ 5 years	17	30%

The data above inform us that respondents in this research is 66% consist of respondents under 60 years old, while the 19 respondents is more than 60 years old. In this research, the 30 respondents is female, while the 26 respondents is male. From 56 respondents, 34 respondents is employed, while the rest 22 respondents is unemployed. From 56 respondents, 46 respondents is in marriage while the 10 respondents is unmarried. The respondents' income level of 34 patients are above UMK, while the 22 respondents have income under UMK. In this research 22 respondents have high education level, while 34 respondents have low education level (up to Junior High School). From 56 patients, 17 patients have undergone diabetes treatment for 5 years or more, while the 39 patients have undergone treatment for 5 years or less.

Table 3.2. Patients' Satisfaction Level

Satisfaction Level	Cases
Very Low	5
Low	7
Moderate	8
High	14
Very High	22

From the data above, we know that patient's satisfaction level in diabetes mellitus outpatient General Hospital PKU Muhammadiyah Purbalingga, 22 of 56 respondents have very high satisfaction level, while 14 respondents have high satisfaction level, 8 respondents have moderate satisfaction level, 7 respondents have low satisfaction level, and the rest 5 respondents have very low satisfaction level.

3.2 Factors Associated with Patient's Satisfaction

Table 3.3. Factors Associated with Patient's Satisfaction

Patient's Satisfaction	Age	Sex	Occupation	Marital Status	Income Level	Education Level	Duration of DM
<i>Kruskal Wallis Test</i> <i>Asymp. Sig.</i>	0.022	0.310	0.897	0.370	0.239	0.021	0.000

From this research though *Kruskal Wallis* test, it was found that there was a significant relationship between the respondent's age and patient satisfaction ($p < 0.05$, 95% CI), the respondent's education level and patient satisfaction ($p < 0.05$, 95% CI), and duration of diabetes mellitus. with patient satisfaction ($p < 0.05$, 95% CI). There were no significant relationships between sex, respondent's occupation, respondent's marital status, and respondent's income with patient satisfaction ($p > 0.05$).

4. Discussion

From this research it was found that several factors associated with level of satisfaction of diabetes mellitus outpatients at General Hospital PKU Muhammadiyah Purbalingga, some of these factors include:

- Age
There is a significant relationship between respondent's age and patient satisfaction ($p=0.022$). In a study conducted by Bener et al (2015) it was found that there was a significant relationship between the age of the respondent and patient satisfaction ($p = 0.012$) where age was a contradictory factor, it was found that respondents at a young age have a higher level of patient's satisfaction. However, in a study conducted by

Shahrani&Baraja (2014), it was found that there was no significant relationship between the respondent's age factor and the level of patient's satisfaction.

- **Education Level**

There is a significant relationship between the respondent's education level and patient's satisfaction ($p=0.021$). In research conducted by Ahmed SF et al (2016) it was found that there is a significant relationship between the respondent's education level and patient's satisfaction where patients with a high level of education have a low level of satisfaction. This is because respondents with higher education levels have higher expectations and understand their rights as patients compared to patients with low education levels. However, in a study conducted by Shahrani&Baraja (2014), it was found that there was no significant relationship between the education level factor and the level of patient's satisfaction.

- **Duration of Diabetes Mellitus**

There is a significant relationship between the respondent's duration of disease and patient's satisfaction ($p=0.021$). Petterson et al in Saatci et al (2010) found that patients with longer diabetes duration were generally more depressed and lacking in energy, positive well-being, and general well-being. However, in a study conducted by Shahrani&Baraja (2014), it was found that there was no significant relationship between the duration of diabetes mellitus with patient's satisfaction.

Other factors like sex, occupation, marital status, and income level were not associated with patient's satisfaction. While in Bener et al (2015), patient's satisfaction was positively associated with variables like high income, employment, and married individuals. In a 5-years cohort study conducted by Bener et al (2012) among Qatari patients with DM reported that females found it more difficult to cope with DM and reported worse condition in comparison with males. In this research there were no significant association between those factors might be due to limited samples.

5. Conclusion

The patients' satisfaction level of Diabetes Mellitus Outpatient in General Hospital PKU Muhammadiyah Purbalingga is very high (39,2%). From this research the factors that significantly associated with patients' satisfaction are age, education level, and duration of diabetes mellitus. While other factors like sex, occupation, marital status, and income level were not associated with patient's satisfaction.

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