

# Factors Influencing Health Seeking Behavior Among Type 2 Diabetes Mellitus Patients

Azka Fathiyatir Rizqillah  
Department of Nursing  
Harapan Bangsa University  
Purwokerto, Indonesia  
[azkafathiyatir@uhb.ac.id](mailto:azkafathiyatir@uhb.ac.id)

Atun Raudatul Ma'rifah  
Department of Nursing  
Harapan Bangsa University  
Purwokerto, Indonesia  
[atunraudatulmarifah@gmail.com](mailto:atunraudatulmarifah@gmail.com)

**Abstract**—Non-communicable disease is an enormous challenge for both national and international health system due to its rapidly increasing incidents and prevalence during the last three decades. Moreover, there are still many undiagnosed diabetes mellitus cases in Indonesia. Both undiagnosed cases and diagnosed cases of diabetes mellitus need an appropriate health seeking behavior to be treated and managed well. Some factors could influence the development of good health seeking behavior (HSB) among type 2 diabetes mellitus patients. This study aimed to investigate some factors that affecting health seeking behavior among type 2 diabetes mellitus in Wangon, Banyumas, Central Java. This study conducted using an analytical correlation method which involved 85 type 2 diabetes mellitus patients. Sample in this study was type 2 diabetes mellitus patients who had no diabetes-related complication and are under treatment process which selected with purposive sampling approach. Socio-demographic and Health Seeking Behavior questioners were used in this study. Bivariate analysis using chi-square test and multivariate analysis using logistic regression were conducted. This study found that most of respondents went to formal health facilities when they had health-related issues (69.4%). Furthermore, the factor that influencing HSB in this study was occupation ( $p: 0.014$ , *chi square test*). While other factors such as age ( $p: 0.799$ , *chi square test*), marital status ( $p: 0.364$ , *fisher test*), gender ( $p: 0.155$ , *fisher test*), duration of having the illness ( $p: 0.114$ , *fisher test*), recent health problem ( $0.779$ , *fisher test*), and the distance from house to health facilities ( $p: 0.342$ , *chi square test*) did not affect significantly HSB. This study found that occupation factor positively impacted to the patients' health seeking behavior. However, the logistic regression test confirmed no factors significantly associated with health seeking behavior. Health seeking behavior is a unique behavior that plays an important role in the treatment and management of non-communicable disease such as type 2 diabetes mellitus.

**Keywords:** *type 2 diabetes mellitus, health seeking behavior*

## I. INTRODUCTION

Diabetes mellitus is an enormous health challenge in recent centuries. The prevalence of type 2 diabetes mellitus increased more than two times in the last three decades worldwide, from 108 million people in 1980 into 422 million people in 2014 [1,2]. Moreover, the increasing prevalence of type 2 diabetes mellitus

mostly occur in middle-low income country, including Indonesia [2]. In 2015, the International Diabetes Federation reported there were 10 million people with diabetes mellitus in Indonesia. Similarly, another study found that the prevalence of diabetes mellitus in Indonesia was 5.7% with more than 70% of those cases are undiagnosed [3].

The increasing number of diabetes mellitus as well as the great number of undiagnosed diabetes mellitus case in Indonesia need to be concerned by health care provider in order to improve the quality of treatment and screening process. There are some factors that may influence the incident of undiagnosed diabetes mellitus case, such as the accessibility of health care facilities and patients' healthseeking behavior [4]. Diabetes patient's health seeking behavior plays essential role in achieving effective diagnosis and treatment of disease in order to prevent the complexities and complication of diabetes mellitus [5].

Furthermore, a study found that diabetes patient's participation in the treatment may improve quality of life as well as reduce the treatment's cost efficiently [4]. While, health-seeking behavior such as early identification of sign and symptom, attendance to health care facility and adherence of treatment process. Inadequate health seeking behavior of diabetes mellitus patients may lead to higher risk of complication [6]. However, some diabetes mellitus patients believe that health-seeking behavior is not a beneficial action because they fear to accept unhealthy condition that unknown before. On the other side, previous study highlights that health seeking behavior may decline the risk of illness' complication and improve patient's quality of life (4,5). Thus, this study aimed to examine factors that influencing health seeking behavior among type 2 diabetes mellitus patients.

## II. METHOD

This study conducted using an analytical correlation method which involved 85 people with type 2 diabetes mellitus. Sample in this study was type 2 diabetes mellitus patients who had no diabetes-related complication and are under treatment process which selected with purposive

sampling approach. Socio-demographic and Health Seeking Behavior questioners were used in this study. Health seeking behavior questionnaire used in this study was firstly developed by Widayati (2012). This questionnaire consists of closed-ended questions which investigate health problem in the last one month and health seeking behavior of patients. This questionnaire had sufficient result of validation and reliability test ( $r=0.687$ ; Cronbach's  $\alpha>0.784$ ). This study conducted chi-square and fisher test for bivariate analysis and logistic regression as multivariate analysis.

### III. RESULTS AND DISCUSSION

This study found that most of respondents went to formal health facilities and health care clinic when they had healthrelated issues (41.2%). While, the characteristic of respondents and their health seeking behavior reported in the table 1 to table 3.

Table 1. The Characteristic of type 2 diabetes mellitus patients in Wangon, Banyumas, Indonesia (n=85)

Characteristic	<i>f</i>	%
<b>Age</b>		
35-44	11	12.9
45-54	30	35.3
55-64	34	40.0
65-74	10	11.8
35-44	11	12.9
<b>Gender</b>		
Male	37	43.5
Female	48	56.5
<b>Education</b>		
Never school	1	1.2
Primary school	30	35.3
Junior high school	32	37.6
High school	20	23.5
Universities	2	2.4
<b>Occupation</b>		
Not working	1	1.2
Labour	21	24.7
Farmer	18	21.2
Entrepreneur	9	10.6
Private	4	4.7

Civil servant	3	3.5
Housewife	29	34.1
<b>Duration of Illness</b>		
1-5 years	71	83.5
6-10 years	14	16.5

Table 1 shows that most of respondents in this study are aged 55 to 64 years old (40%) and dominated by woman (56.5%). Almost most of the respondents have middle high school as the educational background (37.6%) and mostly work as housewife (34.1%). Moreover, more than half of the respondent had diabetes mellitus for about one to five years before (83.5%).

Table 2. The frequency of health problem among type 2 diabetes mellitus patients in Wangon, Banyumas, Indonesia (n=85)

Frequency of health problem in the last one month	<i>f</i>	%
Nothing	6	7.1
1-3x	31	36.5
4-6x	30	35.3
7-9x	14	16.5
>10x	4	4.7
TOTAL	85	100

Table 3. Health seeking behavior against health problem among type 2 diabetes mellitus patients in Wangon, Banyumas, Indonesia (n=85)

Health seeking behavior against health problem	<i>f</i>	%
self care	2	2.4
consultation to formal health facilities	24	28.2
combination of consultation to formal health facilities and healthcare clinic	35	41.2
combination of self-care, consultation to formal health facilities and consultation to healthcare clinic	24	28.2
TOTAL	85	100

Table 2 and 3 reported that most of respondent in this study has one to three health problems in the last one month (36.5%) and mostly visited both formal health facilities and healthcare clinic to manage the symptoms (41.2%). Overall, the health seeking behavior of respondents in this study was sufficient because all of them were visiting the community health care serviced while participated in this study. Furthermore, most of the respondents went to both healthcare formal facilities and

healthcare clinic such as general practitioner, nurse, midwifery, herb and traditional practice in order to manage their health problem. This finding is the opposite with the finding of a health study in the Yogyakarta, Indonesia [7]. That study reported that most people living in Yogyakarta prefer to visit to formal health facilities rather than healthcare clinic. This phenomenon may be affected by the culture, occupation and income between two studies. Patients in this study were mostly living in a rural area with low to middle income, while the study held in Yogyakarta were involved urban society with middle to high income. Similarly, another study found that socio-economic factor strongly influenced the health seeking behavior among chronic disease patients [8]. On the other hand, other studies reported that marital status, age, occupation and educational background positively impacted the quality of health seeking behavior among chronic disease patients [4,7,8].

Table 4. Factors influencing health seeking behavior among type 2 diabetes mellitus patients in Wangon, Banyumas, Indonesia (n=85)

No	Variable	p
1	Occupation	0.014*
2	Age	0.799*
3	Marital status	0.364**
4	Gender	0.155**
5	Duration of illness	0.114**
6	Recent health problem	0.779**
7	Distance from house to health facilities	0.342*
8	Education	0.290**

\* *chi square test*

\*\* *fisher test*

This study found that health seeking behavior among respondents is mostly affected by occupation (p:0.014, chi square test). It is in a line with previous study that reported health seeking behavior is mostly influenced by socio demographic factor such as marital status, education, occupation and health insurance ownership [7]. The occupation factor is excessively related to income which may lead to the willingness to seek health treatment. A study highlighted that the monthly income affects the medical visitation rate of the migrant worker in Beijing as well as the insurance coverage that they have [9]. Moreover, the occupational background also influenced healthcare seeking preference of migrant workers in Thailand. The study examined the health seeking behavior among three various workers in Thailand and found that their preference to utilize the healthcare facilities are different and impacted by the degree of illness [10].

On the other hand, this study noticed that other socio demographic factors such as age, marital status, and gender

were not correlated with health seeking behavior of patients. This point was not in accordance with the previous study conducted in some area of Indonesia. Previous study reported that having a spouse positively impact to health seeking behavior of the urban society in Yogyakarta, Indonesia [7]. Similarly, a study conducted in Jember, Indonesia emphasized that the educational background was strongly correlated with willingness to seek healthcare among chronic patients which was against this study's finding [8].

Table 5. Factors influencing health seeking behavior among type 2 diabetes mellitus patients in Wangon, Banyumas, Indonesia (n=85)

Variable	B	Wald	p value	Exp (□)	95% CI Exp (□)
Gender	0.753	1.36	0.243	2.12	0.60–7.50
Occupation	0.043	0.08	0.767	1.04	0.78–1.38
Illness' duration	1.124	3.30	0.069	3.07	0.91–10.34
Constat	-3.557	8.31	0.004	0.03	

Due to the variation of findings, the logistic regression was done to ensure the most dominant factor to health seeking behavior among patients in this study. The logistic regression highlighted there was no factor that significantly influence the health seeking behavior among respondents. This finding was in a line with previous study assessing health seeking behavior among urban society in Yogyakarta [7]. However, among those insignificant factors, the duration of illness was the most dominant factor followed by gender and occupational factor. It seems that patients who have been in early diagnosed of DM perform better health seeking behavior rather them who have been struggling with illness in a long duration of time. Most of participants in this study who were in the early stage of illness (1-5 years) conducted a positive health seeking behavior such as by consultation in both formal and nonformal health facilities and attending the annual public health service in their area [7]. Moreover, previous qualitative study of health seeking behavior highlighted that occupation was the most dominant factor in this study. This explained that the type of occupation would be an essential point to improve health seeking behavior among chronic disease patients [8,9,10].

#### IV. CONCLUSION

There are various factors affecting health seeking behavior among type 2 diabetes mellitus patients. Most of that factors were socio-demographic factors such as education, occupation, marital status and gender. This study found that occupation factor positively impacted to the patients' health seeking behavior. However, the logistic regression test confirmed no factors significantly associated with health seeking behavior.

**ACKNOWLEDGMENT**

This study conducted based on the funding given by Harapan Bangsa University, Indonesia based on the annual research grant year 2018/2019.

**REFERENCES**

- [1] DanaeL, G., "National, regional, and global trends in fasting plasma glucose and diabetes prevalence since 1980: systematic analysis of health examination surveys and epidemiological studies with 370 country-years and 2.7 million participants", in *Lancet*, 378, 2011, pp 31-40
- [2] World Health Organization, *Global report on Diabetes*, Retrieved from [http://apps.who.int/iris/bitstream/10665/204871/1/9789241565257\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/204871/1/9789241565257_eng.pdf), 2016.
- [3] I Soewondo. P., et al, "Challenges in diabetes management in Indonesia: A literature review", in *Global Health*, vol. 9, 2013, pp 117. doi:<http://dx.doi.org/10.1186/1744-8603-9-63>.
- [4] Liu, C. Y. & Liu, J. S, "Socioeconomic and demographic factors associated with health care choices in Taiwan" in *Asia Pac J Public Health*, vol. 22, 2010, pp 51-62.
- [5] Bhosale, S., Pawar, A. T., and Khumar, S. D., "Healthcare-seeking behavior among diabetic patients in Kozhikode, Kerala" in *International Journal of Medical Science and Public Health*, vol 6 (10), 2017, pp 1524 – 1527..
- [6] Nicolucci, A., et al., "Diabetes attitudes, wishes and needs second study (DAWN2TM): Cross-national benchmarking of diabetes-related psychosocial outcomes for people with diabetes" in *Diabetic Medicine*, vol. 30 (7), 2013, Doi: <https://doi.org/10.1111/dme.12245>. [7] Widayati, A., "Health seeking behavior di kalangan masyarakat urban di kota Yogyakarta" in *Jurnal Farmasi Sains dan Komunitas*, vol. 9(2), 2012, pp 59–65.
- [8] Fauziyah, F., Santoso, T. H., Dewi, S. R., "Factor influencing health seeking behavior family in Tutul Village, Balung, jember" in *The Indonesian journal of health science*, vol. 8 (2), 2013, pp 171-812.
- [9] Peng, Y., Chang, W., Zhou, H., Hu, H., and Liang, W. "Factors associated with health seeking behavior among migrant worker in Beijing, China" in *BMC Health Services*, vol. 10 (69), 2013.
- [10] Naing, T., Geater, A. and Pungrassami, P., "Migrant workers' occupation and healthcare seeking preferences for TB-suspicious symptoms and other health problems: a survey among immigrant workers in Songkhla province, Southern Thailand" in *BMC International Health and Human Rights*, vol. 12 (22), 2013.

This study was funded by Harapan Bangsa University, Indonesia through the annual research grant year 2018/2019.