Factors Influencing Health Seeking Behavior Among Type 2 Diabetes Mellitus Patients

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Abstract—Non-communicable disease is an enormous challenge for both national and international health systems 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 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 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 questions 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 development 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’ health-seeking 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          | f  | %   |
|------------------------|----|-----|
| Age                    |    |     |
| 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|
| Gender                 |    |     |
| Male                   | 37 | 43.5|
| Female                 | 48 | 56.5|
| Education              |    |     |
| 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 |
| Occupation             |    |     |
| Not working            | 1  | 1.2 |
| Labour                 | 21 | 24.7|
| Farmer                 | 18 | 21.2|
| Enterpreneur           | 9  | 10.6|
| Private                | 4  | 4.7 |

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 | f  | %   |
|--------------------------------------------------|----|-----|
| 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 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) |
|----------------|------|------|---------|---------------|
| 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 | 0.009   | 3.07 (0.91-10.34) |
| Constant       | -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.
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