

# Health-seeking behavior of patients with diabetes mellitus in Baguio City

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## Abstract

**Objectives:** To describe the health-seeking behaviors of patients with type 2 diabetes mellitus and to identify the factors that influence their health-seeking behavior.

**Method:** The participants were recruited from the diabetes clinics of Saint Louis University-Hospital of the Sacred Heart and Baguio General Hospital as well as from private clinics of general practitioners, family medicine practitioners, general internists, endocrinologists, and diabetologists (N = 209). They completed questionnaires assessing general health, self-care, and personal models of diabetes (perceived seriousness, perceived treatment effectiveness, and perceived control over diabetes).

**Results:** One hundred fifty-four (73.7%) of the respondents presented to the clinics for regular consultation even if they were asymptomatic. To manage their symptoms in the event of an illness, 128 (61.2%) sought advice from someone, and the first person they went to was their doctor (n = 105, 82%). Eighty six (41.2%) of the respondents visited their doctor on a monthly basis. The factors that were significantly associated with the reason for seeking consult (routine consultation even if asymptomatic) were the presence of co-morbidities (p=0.0417), perceived effectiveness of treatment (p=0.0075), observance of proper diet (p=0.0229), exercise (p=0.0613), and compliance to treatment (p=0.0210). Perceived effectiveness of treatment to control diabetes and prevent complications was significantly associated with the health management action (seeking consult form main physician) (p=0.0364). Factors that were significantly associated with the frequency of consult were non-smokers (p=0.0611), presence of co-morbidities (p=0.0009), a lot of support from main physician (0.0368), previous hospital confinement due to diabetes (p=0.0638), perceived

*seriousness of diabetes ( $p=0.0610$ ), perceived control over diabetes ( $p=0.0024$ ), proper diet ( $p=0.0000$ ), and exercise (0.0098).*

**Conclusions:** *Patients with diabetes mellitus in Baguio City have positive health seeking behaviors. The study provides further support for the role of personal models of diabetes and diabetes self-care management in determining responses to illness.*

## Introduction

Diabetes is a growing global burden, currently affecting 246 million people worldwide and is expected to affect 380 million by 2025. The largest increase in prevalence is projected to occur in developing countries (1, 2).

Diabetes is a major cause of morbidity, mortality, and expense. Long-term hyperglycemia (poor metabolic control) increases the risk of disorders that predispose individuals to hospitalization due to coronary artery disease, stroke, peripheral vascular disease, amputation and nephropathy. Having diabetes can also reduce the life expectancy of a person in good metabolic control by 20 years. Therefore, the effect of diabetes on health and life expectancy is dramatic and costly for the health service.

Evidence shows that tight glucose control among people with type 2 diabetes is associated with lower risk of complications (3-5). However, the control of A1C among people with type 2 diabetes has shown no significant improvement over the past decade (6). In fact, almost two-thirds of individuals do not achieve target HbA1c levels (7). A possible explanation to this dismal statistic is that the attitude towards health is more of crisis-oriented and curative rather than preventive. For diabetes, there is a tendency for patients to delay or ignore health care measures until the complications become evident.

Positive health-seeking behavior (i.e., the early recognition of symptoms, presentation to health facilities, and compliance with effective treatment) should improve control of diabetes and thereby reduce the incidence of complications associated with this devastating disease. Health beliefs appear to have a major impact on people's adherence to treatment for diabetes, and this may affect outcomes (8). There are few

data about the link between health-seeking behavior and morbidity in people with diabetes, showing that a delay in health-seeking behavior will increase the risk of complications (9, 10).

The recently published Medical Research Council Diabetes Research Strategy highlighted the need to investigate the health beliefs of people with diabetes (17). To date, there is no published study dealing with the health-seeking behaviors of the people of the Cordillera. Thus, the identification and development of positive health behaviors can mitigate both the individual and population risk for diabetic complications.

Knowledge about health and health-seeking behavior can help program planners to identify obstacles to early diagnosis and effective treatment, and implement appropriate interventions. An understanding of what people do when they have diabetes can assist program planners by directing health education initiatives, approaching alternative health providers with a view of involving them in the program, and by removing or reducing barriers to presentation to health clinics. Identification of determinants of health-seeking behavior can likewise set the stage for the formulation of effective diabetes-related educational programs (15, 16).

The aim of this study is to describe the health-seeking behavior of patients with type 2 diabetes mellitus and to identify the factors that influence their health-seeking behavior.

## **Research Design and Methods**

This cross-sectional study was conducted in the diabetes clinics of Saint Louis University-Hospital of the Sacred Heart and Baguio General Hospital, and the private clinics of participating general internists, family medicine physicians, endocrinologists and diabetologists. Diabetic patients who came for consult were asked to fill in a questionnaire while they waited for their turn to be seen by their physician. A total of 209 patients with diabetes were recruited.

The survey questionnaire was originally crafted for this study except for the personal models of diabetes questionnaire (46, 47) and Summary of Diabetes Self-Care Activities (43, 48) which were lifted from prior studies. It was validated by experts in the field of diabetes

and endocrinology. Translation of the questionnaire to the local language was not done as the patients understood the language used. The questionnaire contained measures assessing patient characteristics, co-morbidities, diabetes characteristics, emotional support, personal models of diabetes and self-care, and health-seeking behavior. Pre-testing of the questionnaire revealed that the instrument was reliable (Cronbach's coefficient alpha 0.7633). Demographic variables included age, sex, marital status, educational attainment, socio-economic status, health insurance, smoking and drinking profile, and family history of diabetes. The presence of other chronic illnesses, duration of diabetes, history of confinement and knowledge on the causes of diabetes were ascertained. Extent of emotional support was described by a four-point Likert scale response option (ranging from 1 = no support to 4 = lots of support). Qualitative interpretation for emotional support was based on a range of weighted means (2.25 – 3.00 lots of support, 1.50 – 2.24 some support, 0.75 – 1.49 little support, 0.00 – 0.74 no support).

The personal models of the diabetes questionnaire is a brief, seven-item self-report instrument. It measures three constructs: perceived seriousness of diabetes, effectiveness of treatment to control diabetes and prevent complications, and control of diabetes. Each item has a five-point Likert scale response option (ranging from 1 = not at all serious/important/worried/frustrated/some control to 5 = extremely serious/important/worried/frustrated/complete control). The weighted means for each scale was computed and interpreted as extreme/complete (3.20 – 4.00), very/a lot (2.40 – 3.19), fair/moderate (1.60 – 2.39), slight (0.80 – 1.59), not at all/some (0.00 – 0.79).

The Summary of Diabetes Self-Care questionnaire is a self-report instrument that assesses five areas of diabetes self-management (diet, exercise, blood sugar testing, foot care, and medication use) over the previous seven days. The scales were scored by combining scores for items contributing to these five areas. For all scales, higher scores reflected better or more frequent self-care. Results were interpreted as “always” for six to seven days, “sometimes” for four to five days, seldom for two to three days, and “never” for 0 to one day.

Health-seeking behavior was determined by questions pertaining to justification for seeking health care, health management actions, frequency of consult, and factors deterring them from seeking health care.

Data entry and analysis was done using Epi-info software for Windows. Frequencies and means were calculated for the variables. To establish the association between the independent variables and health-seeking behavior, chi-square analysis, t-test and ANOVA were used. The health-seeking behaviors that were utilized as dependent variables were reason for seeking consult, health management actions, and frequency of consult.

## Results

*Characteristics of the study population.* The total population surveyed comprised 209 diabetic patients, 78 (37.3%) men and 131 (62.7%) women (see Table 1). Almost one-half of the respondents (n = 97, 46.3%) was more than 60 years of age. One hundred eighty-one (86.6%) were either married or widowed. There were 101 respondents (48.3%) who reached or finished college level. Socio-economic data showed that 72 patients (37.9%) had a monthly income of less than Php 5,000 and that almost one-half (n = 100, 47.8%) of the respondents have no health insurance. One hundred twenty-eight respondents (61.2%) had no smoking history, while 171 (81.8%) do not drink alcoholic beverages. Family history of diabetes was present in 115 (55%) of the respondents.

Table 1: General Profile of Respondents (N = 209)

Variable	No. (%)
1. Gender	
Male	78 (37.3)
Female	131 (62.7)
2. Age group (in years)	
10 and below	1 (0.5)
11 – 20	3 (1.4)
21 – 30	1 (0.5)
31 – 40	18 (8.7)
41 – 50	32 (15.3)
51 – 60	57 (27.3)
More than 60	97 (46.3)

3. Marital status	
Single	17 (8.1)
Married/ widowed	181 (86.6)
Divorced/ separated	11 (5.3)
4. Highest educational attainment	
Elementary	44 (21.1)
High school	56 (26.8)
College	101(48.3)
Post-graduate	8 (3.8)
5. Average monthly income	
Less than 5, 000 Php	72 (37.9)
5, 000 – 10, 000 Php	59 (31.1)
11, 000 – 20, 000 Php	31(16.3)
More than 20, 000 Php	28 (14.7)
6. Health insurance	
National Health Insurance (i.e., PhilHealth)	93 (44.5)
Private Health Insurance	16 (7.7)
None	100 (47.8)
7. Smoking history	
Smokes at present	14 (6.7)
Stopped smoking	67 (32.1)
Never smoked	128 (61.2)
8. Drinking history	
Drinks alcohol at present	38 (18.2)
Stopped drinking, or never drank alcohol	171 (81.8)
9. Presence of diabetes in the family	
Yes	115 (55.0)
No	94 (45.0)

One hundred fifteen (55%) of the population surveyed were suffering from other chronic diseases, with arthritis and high cholesterol levels accounting for one-third of the associated co-morbidities (Table 2). The duration of diabetes for 88 subjects (42.1%) was between 1-5 years.

One hundred sixty-two (77.5%) of the patients were not hospitalized in the recent past. Majority of the diabetic patients (n = 190, 90.9%) know the cause of their diabetes, with unhealthy diet (n = 109, 57.4%) believed as the main culprit for their disease (Table 3).

*Table 2: Co-morbidities among Diabetic Patients*

<b>Variable</b>	<b>No. (%)</b>
1. Presence of Co-morbidities in general (N = 209)	
Yes	115 (55.0)
No	94 (45.0)
2. Specific Co-morbidities (N = 115)	
Arthritis	41 (35.7)
Hypercholesterolemia	41 (35.7)
Hypertension	29 (25.2)
Back pain	26 (22.6)
Heart disease/ heart attack	17 (14.8)
Asthma	11 (9.6)
Allergies	9 (7.8)
Other co-morbidities	9 (7.8)
Stroke	9 (7.8)
Heart failure	7 (6.1)
Ulcer	7 (6.1)
Migraine	6 (5.2)
Cancer	5 (4.3)
Renal failure	5 (4.3)
Gall stones	4 (3.5)
Severe skin disease	4 (3.5)
Depression	3 (2.6)
Hepatitis	1 (0.9)
Tuberculosis	1 (0.9)

*Table 3: Characteristics of Diabetes Mellitus (DM). (N = 209)\**

<b>Variable</b>	<b>No. (%)</b>
1. Chronicity (in years) of DM	
Less than one	37 (17.7)
1 – 5	88 (42.1)
6 – 10	40 (19.1)
More than 10	44 (21.1)
2. Hospitalization due to DM	
Yes	47 (22.5)
No	162 (77.5)
3. Claims to be knowledgeable about the cause of DM	
Yes	190 (90.9)
No	19 (9.1)
4. Attributed causes of DM	
Unhealthy diet	109
Hereditary	76
High sugar intake	74
Pressure and stress	35
Old age	31
High blood pressure	29
Physical inactivity/ sedentary lifestyle	28
Obesity	26
Pancreas/ insulin problem	15
Alcoholic drinks	10
Others	6

\*Except variable # 4; more than one cause can be attributed to.

*Extent of emotional support.* The patients reported more emotional support from the partner or family, followed by their main physician (Table 4).



*Table 4: Extent of Emotional Support for Diabetic patients from Various Sources*

<b>Source of Support</b>	<b>Mean</b>	<b>Interpretation</b>
1. Partner/ family	2.60	Lots of support
2. Main physician	2.34	Lots of support
3. Friends	1.67	Some support

*Personal Models of Diabetes.* The respondents perceived their diabetes to be fairly serious (QI 2.06). They perceived their treatment to be very effective (QI 3.00) in controlling their blood sugar and in preventing complications. They had fair or moderate control over their diabetes (QI 2.38) (Table 5).

*Table 5: Personal Models of Diabetes*

<b>Personal Model Question</b>	<b>Mean</b>	<b>Interpretation</b>
1. Seriousness of DM		
How worried are you about developing complications of diabetes (like eye problems, foot ulcers, heart attacks)?	2.46	
Very worried		
How much has having diabetes changed your activities (such as your family and social events, work, or hobbies)?	2.13	
Moderately changed		
How serious is your diabetes?	1.57	Slightly serious
Over-all perceived seriousness	2.06	Fairly serious
2. Treatment Effectiveness		
How important is controlling your blood glucose levels for avoiding complications from diabetes?	3.04	
Very important		

How important is following your self-care recommendations (for example, diet, exercise, and glucose testing) for controlling your diabetes?	2.96	
Very important		
Over-all perceived treatment effectiveness	3.00	Very important
3. Control over DM		
How much control do you feel you have over your blood glucose level?	2.42	
A lot of control		
How frustrated do you feel when trying to take care of your diabetes?	2.32*	Fairly frustrated/ Moderate control
Over-all perceived control	2.38	Moderate control

\*Level of frustration was inversely related to level of control. Hence, before obtaining the mean, responses were reversed to derive the level of control (i.e., not at all frustrated meant complete control, and vice-versa).

*Summary of diabetes self-care.* Of the last seven days, the respondents were always compliant with their medications (6.69 days  $\pm$  0.57), adhered to the dietary and exercise self-care sometimes (4.73 days  $\pm$  1.67 and 3.64 days  $\pm$  2.46 respectively), and had poor foot care (3.14 days  $\pm$  2.21) and blood sugar monitoring (1.89 days  $\pm$  2.3) (Table 6).

*Table 6: Summary of Diabetes Self-Care Activities*

<b>Self-Care Question</b> <b>On average, how many of the last seven days have you:</b>	<b>Mean</b>	<b>Interpretation**</b>
<b>1. Diet</b>		
Followed a healthful eating plan?	4.86 ± 2.42	Sometimes
Followed your own healthy eating plan?	4.79 ± 2.39	Sometimes
Eaten five or more servings of fruits and vegetables?	5.19 ± 2.18	Sometimes
Not* eaten high-fat foods, such as red meat or full-fat dairy products?	4.10 ± 2.29	Sometimes
Over-all observance of proper diet	4.73 ± 1.67	Sometimes
<b>2. Exercise</b>		
Participated in at least 30 minutes of general physical activity?	3.70 ± 2.77	Sometimes
Participated in a specific exercise session other than what you do around the house or as part of your work?	3.55 ± 2.86	Sometimes
Over-all participation in exercise	3.64 ± 2.46	Sometimes
<b>3. Blood sugar monitoring</b>		
Tested your blood sugar?	1.88 ± 2.41	Seldom
Tested your blood sugar the number of times recommended by your health care provider?	1.90 ± 2.35	Seldom
Over-all blood sugar monitoring	1.89 ± 2.25	Seldom
<b>4. Foot care</b>		
Checked your feet?	4.34 ± 2.81	Sometimes
Inspected the inside of your shoes?	1.93 ± 2.67	Seldom
Over-all foot care	3.14 ± 2.21	Seldom
<b>5. Compliance to treatment</b>		
Taken your recommended diabetes medications?	6.60 ± 1.28	Always
Taken your recommended insulin injections?	6.36 ± 1.55	Always
Taken your recommended number of diabetes pills?	6.53 ± 1.44	Always
Over-all compliance to treatment	6.69 ± 0.57	Always

\*Please refer to actual questionnaire. Note that the responses were reversed (i.e., 0 day of eating high-fat food meant 7 days of not eating high-fat food, and vice-versa) in order to get the mean for the Observance of Proper Diet.

\*\* Legend: Always = 6 to 7 days, Sometimes = 4 to 5 days, Seldom = 2 to 3 days, and Never = 0 to 1 day. Interpretations were based on the mean value (without the standard deviation) rounded-off to the nearest whole number.

*Health-Seeking Behavior.* One hundred fifty four (73.7%) of the respondents visited the clinics for regular consultation even if they were asymptomatic (Table 7). Of the 55 patients who were symptomatic, 29 (52.7%) sought consult because of the great degree of discomfort associated with their complaint as well as the acuteness of the symptom (n = 35, 65.5%). To manage their symptoms in the event of an illness, 128 (61.2%) sought consult or advice from someone, and the first person they went to was their doctor (n = 105, 82%). Eighty six (41.2%) of the respondents visited their doctor on a monthly basis. The lack of resources prevented 43.5% of the respondents to seek consult on a regular basis.

Table 7: Health-Seeking Behavior of Diabetic Patients (N = 209)\*

<b>Factor</b>	<b>No. (%)</b>
1. Reason for seeking consult	
Asymptomatic/ routine	154 (73.7)
Symptomatic	55 (26.3)
2. Discomfort among symptomatics	
A lot of discomfort	29 (52.7)
Some discomfort	15 (27.3)
A little discomfort	10 (18.2)
No discomfort	1 (1.8)
3. Duration of symptoms among symptomatics	
Acute ( $\leq$ 1 week)	36 (65.5)
Sub-acute ( $>$ 1 week, $\leq$ 1 month)	15 (27.3)
Chronic ( $>$ 1 month)	4 (7.2)
4. First thing to do when sick	
Consult or seek advice from someone	128 (61.2)

Self-medicate	55 (26.3)
Change my behavior	25 (12.0)
Others	1 (0.5)
5. First person to consult when sick	
Doctor	105 (82.0)
Partner/ family member	22 (17.2)
Pharmacist	1 (0.8)
6. Frequency of consult	
Monthly	86 (41.2)
As needed	54 (25.8)
Weekly	42 (20.1)
Quarterly	21 (10.0)
Yearly	6 (2.9)
7. Hindrance to seeking consult	
Lack of finances	91 (43.5)
Too busy	51 (24.4)
Feels fine	30 (14.4)
Others	11 (5.3)
Lack of accessibility	8 (3.8)
Lack of family support	6 (2.9)
Forgets	4 (1.9)
Feels depressed	4 (1.9)
Does not like taking drugs	3 (1.4)
Does not understand the doctor	1 (0.5)

\*Except variable nos. 2, 3, & 5

*Determinants of Health-Seeking Behavior.* According to a survey (Table 8), the factors that were significantly associated with the reason for seeking consult (routine consultation even if asymptomatic) were presence of co-morbidities ( $p=0.0417$ ), perceived effectiveness of treatment ( $p=0.0075$ ), observance of proper diet ( $p=0.0229$ ), exercise ( $p=0.0613$ ), and compliance to treatment ( $p=0.0210$ ). Perceived effectiveness of treatment to control diabetes and prevent complications was significantly

associated with the health management action (seeking consult from main physician) ( $p=0.0364$ ). The factors that were significantly associated with the frequency of consult were non-smokers ( $p=0.0611$ ), presence of co-morbidities ( $p=0.0009$ ), lots of support from main physician ( $0.0368$ ), previous hospital confinement due to diabetes ( $p=0.0638$ ), perceived seriousness of diabetes ( $p=0.0610$ ), perceived control over diabetes ( $p=0.0024$ ), proper diet ( $p=0.0000$ ), and exercise ( $0.0098$ ).

*Table 8: Determinants of Health-Seeking Behaviors*

Exposure \ Outcome	Reason for Seeking Consult	Health Management Actions	Frequency of Consult
	p-value	p-value	p-value
1. General profile			
Smoking status	0.8558	0.7789	0.0611**
Presence of co-morbidities	0.0417*	0.0729	0.0009*
2. Emotional support from various sources			
Main physician	0.2177	0.1981	0.0368*
3. Diabetes mellitus			
Hospitalization status	0.3221	0.8736	0.0638**
4. Personal models			
Perceived seriousness of dm	0.8899	0.6639	0.0610**
Perceived importance of treatment methods	0.0075*	0.0364*	0.4669
Perceived control over dm	0.0075*	0.4092	0.0024*
5. Summary of self-care activities			
Observance of proper diet	0.0229*	0.1303	0.0000*
Participation in exercise	0.0613**	0.1757	0.0098*
Compliance to treatment	0.0210*	0.5092	0.1998

\* ( $P\text{-value} \leq 0.05$ )

\*\*Borderline significant: p-value between 0.05 And 0.07.

## Discussion

Health-seeking behavior has been defined as any action undertaken by individuals who perceive themselves to have a health problem or to be ill, for the purpose of finding an appropriate remedy (18). Health seeking behavior is preceded by a decision making process that is further governed by individual and/or household behavior, community norms and expectations as well as provider-related characteristics and behavior. The interplay of certain factors is central in the final choice of a care-seeking option.

The study reveals that most of the respondents seek medical care on a regular basis even if they are asymptomatic. In terms of health management actions, the first choice is to seek advice from their doctors with the first sign of an illness. Considering that the Philippines is a developing country, these results are very encouraging. This reflects the heightened awareness of the diabetic patients of the risks and complications associated with poor control of diabetes. There is a prevailing perception that physicians provide better quality of service, and that they are in the best position to manage a chronic and serious disease like diabetes. In addition, the free services offered in the diabetes clinics (e.g., free sugar and cholesterol screening, and free consultations) could have contributed to good health-seeking behaviors. These findings are similar to the results from the studies conducted by Tupasi (19, 20), WHO (21), Peng (22) and Bakri (23). Self-medication is not a popular option in this study, contrary to the evidence from previous studies (24, 25).

In this study, the presence of other co-morbid conditions is a predictor of higher rate of consultations even if the respondents were feeling well. When illness is equated with significant morbidity and mortality, the probability of seeking medical care will be high. In order to take care of themselves, patients need to feel in control of their illness, and part of this involves having adequate information. The need to gain further information about a condition may be an important factor leading to consultation (26, 27), and people who cope with illness by seeking information tend to use more services (28, 29, 30).

Results from the study show that self-management activities such as observance of proper diet, exercise and compliance to treatment were significantly associated with good health-seeking behaviors even if the

over-all scores for the dietary and exercise parameters of self-care were low. Such observation may be due to the failure of health care providers to educate patients with diabetes on these activities as well as the lack of regular reinforcement and review. Higher levels of self-care mean more autonomy and motivation in their inclination to positive health-seeking behaviors. They become more conscious of the importance of controlling their diabetes, and they possess a better understanding of the possibility of preventing complications (31). Participation in a comprehensive self-management program improves health-seeking behaviors, improves glycemic control, blood pressure and LDL cholesterol (32, 33). A study by Venmans et al showed that a multifaceted educational program positively influenced determinants of health seeking behavior (34). However, according to an earlier paper by Simmons (35), a complex balance of advantages and disadvantages of the diabetes-related self-care activities may be a barrier to health care seeking. Thus, diabetes education time should not only be spent in explaining to patients what diabetes is but also on how to carry out self-care tasks.

Based on this survey, significant correlation exists between health-seeking behavior and perceived seriousness of diabetes, effectiveness of treatment, and control over diabetes. In a study by Larkey et al (36), seriousness of a disease had the most effect on visits to doctors, with more serious disease leading to prompter visits. In a study by Ming Yeong Tan, poor complication preventive behavior among subjects was associated with lack of perceived seriousness of diabetes (37). In a study by Campbell (38) individuals were more likely to seek care if treatment effectiveness resulted in health maintenance and prevention of complications.

It has become apparent in this paper that the respondents' perspectives on the extent of emotional support provided by doctors plays a major role in health seeking behavior. Such experience may influence the patient's perspective of the quality of services and ultimately influence the subsequent health-seeking behavior. This basically boils down to patient satisfaction. According to Olenja, an essential factor in determining whether a person seeking health care complies with treatment and maintains a relationship with the health facility and/or provider is client (patient) satisfaction (39).

Although a significant proportion of the study population was more than 60 years old, reached college level and had meager monthly income, it was observed that socio-demographic factors such as age, educational



attainment, and socio-economic status were negative determinants to the health-seeking behavior of the subjects. This may be explained by the uniform access to care of the subjects primarily through the diabetes clinics. Biological aging means a greater likelihood for people to seek health care because as people age, the typology of disease shifts from infectious communicable diseases to chronic non-communicable diseases (40, 41). In several studies, lower income and lesser education resulted in lower rates of health-seeking (25, 42, 43, 44). College degree and higher family income were associated with a higher level of understanding of a disease (45), a greater sense of control over one's life, encouraging one to seek information that may improve health. Better income means more resources to buffer against illnesses.

This study has several limitations. All measures were self-reported. The researcher could have also used medical records to validate the health-seeking behaviors. Whether the reported behavior is more likely to be over reported due to social desirability or underreported due to recall bias remains unclear. The cross-sectional design of the study precludes causal inferences. Finally, because of the relatively small number of subjects recruited, results generated from this study may not be generalizable to all patients with diabetes.

## **Conclusion**

Health-seeking behavior is complex and no one single method may be used to explain or establish any pattern. It is clear from this study that general determinants such as age, gender, socio-economic status, and educational attainment are not the only factors that affect health-seeking behavior. An understanding of how people make decisions about their health is equally important. It is, therefore, recommended that in-depth interviews and focused-group discussions be conducted with diabetic patients in an attempt to describe the pattern of decisions and actions. Health-seeking behavior is a reflection of the prevailing conditions, which interact synergistically to produce a pattern of care seeking but which remains fluid and, therefore, amenable to change. Prompt health seeking is critical in the bid to provide patient-oriented services.

## Acknowledgements

This study was carried out under the University Research Grants Program of Saint Louis University for the School Year 2009-2010.

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