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A Cross-Sectional Study on Patient Satisfaction at International Islamic University Malaysia (IIUM) Family Health Clinic, Kuantan Pahang Malaysia

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Abstract

Introduction: Patient satisfaction may be defined as a representation of attitude, emotion and perception towards health services provided. It may be measured using tools such as patient satisfaction surveys thereby allowing healthcare provider to improve their quality of service. Thus, our study aims to measure the level of patient satisfaction towards International Islamic University Malaysia (IIUM) Family Health Clinic, Kuantan, Pahang.

Objectives: To measure the level of patient satisfaction towards the primary care service of International Islamic University Malaysia (IIUM) Family Health Clinic, Kuantan, Pahang, Malaysia.

Methodology: A cross-sectional study was conducted among 200 patients attending IIUM Family Health Clinic selected through convenient sampling. A set of self-administered validated questionnaire which includes the Patient Satisfaction Questionnaire 18 (PSQ-18) were given to the respondents. Descriptive analysis was used to describe socio-demographic and socioeconomic factors of respondents as well as the score of patient satisfaction. Relation between sociodemographic and patient satisfaction were analyzed using Kruskal Wallis test.

Results: Out of majority of the respondents were from the age group 30 to 49 years-old (57.7%), female (63.9%), Malay (96.4%) Muslim (98.5%), live in urban residence (84.0%), married (68.0%), have tertiary level education (87.6%). working (67.0%), and have a household income of more than RM3000. The overall satisfaction score was 70.75 (78.6%). Highest satisfaction was in interpersonal manner, and the lowest was in time spent with doctors. There were significant association between overall satisfaction with marital status, general satisfaction with education background, interpersonal manner with ethnic and marital status, financial aspect with age group, working status and marital status, and time spent with doctor with age group of patients.

Conclusion: Mean score and percentage of the patient satisfaction was high in IIUM Family Health Clinic. However, there are areas that are still concerning and require improvement such as the time spent with doctor. By doing so, the quality of care and overall patient satisfaction may be improved.

Background

Primary care is the basic or general healthcare that focuses on the point at which a patient first seeks for medical assistance. It is basically the first level of care accessed by communities in the national healthcare system, providing not only curative treatment but also health promotion, preventive and rehabilitative cares. It also forms the basis for referrals to secondary and tertiary level care [1]. According to the Ministry of Health, in Malaysia, the distribution of primary care clinics throughout the country was about 2.09 per 10000 population in the year 2009, in which the number of registered private primary care clinics outnumbered the public primary care by 6-fold. Currently, other than the private and public primary care services provided, public universities offering medical training also provides health services and may have their own hospitals and primary care clinics. These settings function to provide training and research platform for medical undergraduates and postgraduates as well as provide health services to nearby communities. International Islamic University Malaysia (IIUM) specifically kuantan Campus, being one of the universities offering medical courses have also developed its healthcare services which includes the IIUM Family Health Clinic (formerly known as IIUM Primary Care Clinic). In the role of

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primary care, it focuses on patient-centered care whereby patient’s needs, preferences and expectations play an important part in their treatment plan. Therefore, it is also important to identify the level of patient satisfaction in these settings in order to improve the health services provided.

Patient satisfaction is an abstract concept with differing existing definitions. Some authors refer patient satisfaction as a representation of attitude towards health services provided, while others add that it involves emotions and perceptions as well. Another existing definition considers it a coalescence of ideal care expectations versus real care perceptions [2]. Although a standard concept for patient satisfaction is somewhat unavailable, methods of measurement is readily available in the form of various validated questionnaires, customized and specified to different sample groups even in different languages and regions of the globe. An example of such method of measurement includes the short-version Patient Satisfaction Questionnaire (PSQ-18).

Patient satisfaction surveys are excellent tools to gauge weaknesses and thereby allow healthcare providers to improve their quality of service. A patient feedback survey performed in 50 different Massachusetts hospitals for example resulted in implementation of a variety of successful improvement projects [2]. Even though ample studies have been done to explore the patient satisfaction towards health services in Malaysia, according to Hizlinda et al. 2012, studies examining patient satisfaction in the university-based primary care clinics are still scarce. Since measurement of patient satisfaction are relegated to service improvement efforts by health clinics, more studies should be done in the above settings in order to obtain evaluation from the patients and thus, consistently improve their services. Moreover, a patient satisfaction study in the IIUM Family Health Clinic has never yet been done in the past.

Methodology

Study design

This was a cross-sectional study from 8th July to 19th July 2019.

Study area

IIUM Family Health Clinic, Kuantan was selected as a study area.

Target population

Patients attending IIUM Family Health Clinic aged 18-60 years old.

The inclusion criteria are:

a) Patients who have attended IIUM Family Health Clinic, Kuantan, Pahang.

b) Patients between 18 to 60 years of age.

The exclusion criteria are:

a) Patient who are illiterate.

b) Patient who cannot read and understand ‘Bahasa Melayu’.

Study duration

The study was conducted from 8th July to 19th July 2019.

Sample size calculation

The sample size was calculated using single mean formula with total 200 patients attending IIUM Family Health Clinic recruited in this study.

Table 1: Sociodemographic characteristics of respondent of family health clinic.

Characteristics	n	%
Age (years)	<30	70 36.1
	30-49	112 57.7
	50-60	12 6.2
Gender	Male	70 36.1
	Female	124 63.9
Ethnic	Malay	187 96.4
	Non-Malay	7 3.6
Religion	Muslim	191 98.5
	Non-Muslim	3 1.5
Residential	Urban	163 84
	Rural	31 16
Marital Status	Single	62 32
	Married	130 67
	Separated	2 1
Educational Level	Primary/Secondary School	24 12.4
	Tertiary Level	170 87.6
Working Status	Working	130 67
	Not working	16 8.2
	Student	42 21.6
	Pensioner	6 3.1
Income (RM)	<3000	41 21.1
	≥3000	153 78.9
Purpose of Visit	Follow-up	32 16.5
	New Case	146 75.3
	Others	16 8.2

Data collection process

Before the starting data collection, the researchers were given the instruction to perform the data collection within a period of 2 weeks (from 8th July to 19th July 2019). They were briefed to inform the participant to complete the self-reported questionnaire. Participants who did not meet the inclusion criteria were excluded from the data collection.

The researches provided the questionnaires to the participants to be filled in through self-reported method. This is done after introduction by the researches regarding the objectives of this study, the confidentiality and consent obtained from the participants. The participants were required to complete the questionnaires within a stipulated time with the presence of the researchers.

Research instruments

This research used a self-administered validated questionnaire. The questionnaire has mainly two sections; Section A and Section B.

The first section encompasses the personal data such as the sociodemographic, socioeconomic and health characteristics of the patient.

The second section is to explore patient satisfaction towards the healthcare service by using the Short-Form Patient Satisfaction Questionnaire (PSQ-18) originally developed by Marshall and Hays [3], and validated among Malaysian population. It is in Bahasa Malaysia and comprises of 18 questions with 7 dimensions which are scored on

Table 2: Satisfaction score based on items in PSQ-18.

Items of Satisfaction from Patient Satisfaction Questionnaire 18 (n=194)		Yes		Uncertain		No		Mean	Standard Deviation
PSQ1	Doctor good at explaining decisions	177	91.20%	9	4.60%	8	4.10%	4.28	0.8
PSQ2	Doctor came out with appropriate tools	168	86.60%	18	9.30%	8	4.10%	4.15	0.79
PSQ3	Care received was appropriate	173	89.20%	13	6.70%	8	4.10%	4.21	0.78
PSQ4	Doctor made me wonder if diagnosis was correct	56	28.90%	45	23.20%	93	47.90%	3.25	1.17
PSQ5	Was not set back financially	144	74.20%	33	17.00%	17	8.80%	3.97	0.98
PSQ6	Doctor checked all relevant things	178	91.80%	8	4.10%	8	4.10%	4.27	0.79
PSQ7	Paid for more medical care than affordable	18	9.30%	44	22.70%	132	68.00%	3.88	1
PSQ8	Had easy access to the service needed	119	61.30%	53	27.30%	22	11.30%	3.73	1.05
PSQ9	Waited for long before doctor arrived	54	27.80%	55	28.40%	85	43.80%	3.19	1.14
PSQ10	Doctor was business-like and impersonal	19	9.80%	12	6.20%	163	84.00%	4.05	1.01
PSQ11	Doctor was friendly and courteous	180	92.80%	6	3.10%	8	4.10%	4.36	0.82
PSQ12	Doctor was hurried	30	15.50%	15	7.70%	149	76.80%	3.82	1.07
PSQ13	Doctor ignored concerns	22	11.30%	13	6.70%	159	82.00%	3.97	1.03
PSQ14	Has doubts on doctor's ability	18	9.30%	13	6.70%	163	84.00%	4.06	0.98
PSQ15	Doctor spent right amount of time	107	55.20%	65	33.50%	22	11.30%	3.57	0.94
PSQ16	Was hard to get doctor out right away	13	6.70%	39	20.10%	142	73.20%	3.91	0.93
PSQ17	Was dissatisfied about some of the care received	22	11.30%	21	10.80%	151	77.80%	3.89	1
PSQ18	Believe that care will be received in the future	174	89.70%	9	4.60%	11	5.70%	4.2	0.88

Table 3: Seven scales of satisfaction from PSQ18 derived from satisfaction item in Table 2.

PSQ-18 Domain	No. of Items	Maximum Possible Score	Actual Score (SD)	Score (%)	Mean (SD)
General Satisfaction	2	10	8.10 (1.59)	81	4.06 (0.79)
Technical Quality	4	20	15.73 (2.68)	71.6	3.94 (0.67)
Communication	2	10	8.25 (1.61)	82.5	4.14 (0.80)
Interpersonal Manner	2	10	8.41 (1.62)	84.1	4.21 (0.80)
Financial Aspects	2	10	7.86 (1.69)	78.6	3.92 (0.85)
Time Spent with Doctor	2	10	7.39 (1.56)	73.9	3.67 (0.79)
Accessibility and Convenience	4	20	15.02 (2.58)	75.1	3.76 (0.64)
Composite Score	18	90	70.75 (10.76)	78.6	27.69 (4.25)

a five-point Likert scale ranging from one to five (strongly disagree to strongly agree). The 7 dimensions include general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor and accessibility and convenience. To control for acquiescent responding, the instrument contains both positively-worded and negatively-worded items. Participants were asked to indicate how they feel about the medical care they receive in general on the likert scale.

Statistical analysis

The data was analysed by using SPSS IBM version 25.0 for Windows. Descriptive analysis was used to describe socio-demographic and socioeconomic factors of respondents as well as the score of patient satisfaction. They were expressed as means and standard deviations median and interquartile range. The other categorical variables were expressed as proportions and frequencies. Relation between sociodemographic and patient satisfaction were analysed using Kruskal Wallis test.

Ethical consideration

Before giving questionnaire to the respondents, they were first explained by the researchers about the study. The study was approved by the Kulliyah Research Committee (KRC) and IIUM Research

Ethics Committee (IREC). We had received consent that had been filled-in and signed by the respondents.

Results

There were 194 out of 200 questionnaires collected after the data collection phase. Therefore the response rate in this study is 97%. Table 1 describes the sociodemographic distribution of the respondents in terms of age, gender, ethnic, religion, residential area, marital status, education level, working status, income, and purpose of visit. Majority of the respondents were from the age group 30 to 49 years-old (57.7%), female (63.9%), Malay (96.4%) and Muslim (98.5%). Most of them live in urban residence (84.0%), are married (67.0%), and have tertiary level education (87.6%). More than half of the respondents are working (67.0%), and majority have a household income of more than RM3000. Out of all the respondents, 146 (75.3%) of them visited the family health clinic for new case.

Table 2 summarizes the responses for all 18 items of the PSQ-18 used for the survey. It shows that the lowest satisfaction level was recorded on Item 9 (waiting for too long for doctor to arrive) with mean score of 3.19, meanwhile the highest level of satisfaction was recorded for Item 11 (Doctor was friendly and courteous) with the mean score of 4.39.

Table 4: Association between sociodemographic factors and each domain in PSQ 18 and total satisfaction.

Characteristics		n	%	7 DOMAIN [#]							TOTAL SATISFACTION [#]
				General Satisfaction	Technical Quality	Communication	Interpersonal Manner	Financial Aspect	Time Spent with Doctor	Accessibility and Convenience	
				Level of Satisfaction [median (IQR)]							
Age (years)	<30	70	36.1	8(2)	16(4)	8(2)	9(2)	8(2) ^{**}	7(2) [*]	15(2)	71.0(11)
	30–49	112	57.7	8(2)	16(3)	8(1)	8(2)	8(3) ^{**}	8(2) [*]	15(3)	70.0(11)
	≥50-60	12	6.2	9(1)	16(4)	9(2)	9(2)	7.5(3) ^{**}	8.5(3) [*]	16.5(4)	77.0(11)
Gender	Male	70	36.1	8(2)	16(3)	8(1)	9(2)	8(3)	7(2)	15(4)	71.0 (13)
	Female	124	63.9	8(1)	16(4)	8(1)	8(2)	8(2)	8(1)	15(2)	71.0 (11)
Ethnic	Malay	187	96.4	8(1)	16(3)	8(1)	8(2) [*]	8(2)	8(2)	15(2)	71.0 (11)
	Non-Malay	7	3.6	9(1)	19(3)	10(2)	10(0) [*]	9(3)	8(3)	15(2)	78.0 (9)
Residence	Urban	163	84	8(1)	16(3)	8(1)	8(2)	8(2)	8(2)	15(3)	71.0 (10)
	Rural	31	16	8(2)	16(3)	8(3)	9(3)	8(2)	8(3)	14(3)	71.0 (12)
Marital status	Single	62	32	8(1)	16(3) [*]	8.5(2)	9(2) ^{**}	8.5(2) ^{**}	8(2)	16(3)	73.5 (11) [*]
	Ever Married	130	67	8(1)	16(3) [*]	8(1)	8(2) ^{**}	8(3) ^{**}	8(2)	15(3)	70.0 (12) [*]
Highest education level	Primary/secondary education	24	12.4	9(2) [*]	16(4)	9(2)	9(2)	8(3)	8(2)	15(3)	73.0 (12)
	Tertiary education	170	87.6	8(1) [*]	16(3)	8(1)	8(2)	8(2)	7.5(2)	15(2)	71.0 (11)
Current employment status	Working	130	67	8(1)	16(3)	8(1)	8(2)	8(2) ^{**}	8(2)	15(3)	71.0 (10)
	Not working	16	8.2	8(1)	16(4)	9(1)	9(1)	6.5(2) ^{**}	8(2)	14.5(3)	70.5 (9)
	Student	42	21.6	8(2)	16(4)	8(1)	9(2)	9(2) ^{**}	7(2)	15(2)	71.0 (12)
	Pensioner	6	3.1	9(3)	14.5(3)	9(3)	8.5(3)	8.5(2) ^{**}	7.5(2)	17(4)	76.5 (16)
Monthly household income (RM)	<3000	41	21.1	8(2)	16(5)	8(2)	9(2)	8(3)	8(3)	15(3)	72.0 (10)
	≥3000	153	78.9	8(1)	16(3)	8(1)	8(2)	8(2)	8(2)	15(2)	71.0 (11)
Purpose of visit to clinic	Follow-up treatment	32	16.5	8(2)	15.5(4)	8.5(2)	8.5(2)	8(2)	8(1)	15(5)	71.0 (12)
	New case	146	75.3	8(1)	16(4)	8(1)	8(2)	8(2)	8(2)	15(2)	71.0 (11)
	Others	16	8.2	8(2)	16(1)	9(2)	9(2)	8.5(3)	7.5(2)	15.5(2)	77.0 (12)

^{*}p-value<0.05

^{**}p-value<0.01

[#] Kruskal-Wallis Test

Table 3 describes the respondents’ satisfaction towards IIUM Family Health Clinic based on the 7 domains in PSQ-18, Interpersonal Manner has the highest mean satisfaction score (4.21) followed by Communication (4.14), General Satisfaction (4.06), Technical Quality (3.94), Financial Aspects (3.92), Accessibility and Convenience (3.76) and the domain with the lowest mean score is Time Spent with Doctor (3.67). The overall satisfaction score given by the respondents was 70.75 (78.6%).

Table 4 shows the median score of the 7 domains of patient satisfaction and the total satisfaction in relation to the sociodemographic factors of the respondents. Kruskalwallis analysis was done to determine the significant relationship between the independent and dependent factors. It was found that the general satisfaction is significantly associated with the patients’ education level ($p<0.05$) whereby patients with tertiary education has lower median satisfaction score (8) as compared to those who have lower education level. In the aspect of technical quality, marital status is significantly associated with the patient satisfaction ($p<0.05$). Ethnic and marital status of the respondents are significant associations with the patient satisfaction in terms of the doctors’ interpersonal manner ($p<0.05$). Non-Malays gave a higher score for interpersonal manner as compared to Malays meanwhile respondents who were single has a

higher median satisfaction score as compared to those who were ever married. Patient satisfaction in the aspect of finance is significantly associated with the respondents’ age group, marital status, and working status ($p<0.01$). Patients from the age group of 50 to 60 years-old have lower median score of satisfaction with the financial aspect (7.5) as compared to patients of age group 30 to 49 (8) and less than 30 years-old (8). Respondents who were students has the highest median satisfaction score in financial aspect (9) followed by pensioners (8.5) and workers (8) meanwhile respondents who didn’t work have the lowest median satisfaction score (6.5). Single patients gave a higher satisfaction score in financial aspect (8.5) as compared to ever married patients (8). For the domain time spent with doctor, only the age group of the respondents was significantly associated with the patient satisfaction, whereby respondents from the age group more 50 to 60 years have the highest satisfaction as compared to those in younger age groups. Overall satisfaction is significantly associated with marital status whereby single patients have higher median satisfaction score (73.5) as compared to those who were ever married (70.0).

Discussions

Level of patient satisfaction

In our study we have found that the overall patient satisfaction

towards IIUM Family Health Clinic is generally good with the total mean score of 70.75 (78.6%), showing that the patients attending the clinic are satisfied with the services provided. This high level of satisfaction is similar to the findings in a study conducted in the Primary Care Clinic of University Kebangsaan Malaysia (UKM), and a few other local studies which showed high level of patient satisfaction at primary care settings. However, in a study conducted at the outpatient of Hospital Tunku Abdul Rahman (HTAR), it was found that the total mean satisfaction score given by the patients was 59.2 which are quite low as compared to our results.

The mean score of Interpersonal Manner is 4.21, highest among all 7 domains in the PSQ-18, followed by the domain Communication with the mean score of 4.19. This correlates to the research done by Hizlinda et al 2012, whereby most of the patients were very satisfied with the doctor's interpersonal and communication skills. Similar with their setting at UKMMC, the doctors working in IIUM family health clinic are mainly registrars in family medicine and family medicine specialists who are trained to inculcate the principles of primary care whereby patient-centered care is the core element in managing the patients [1]. It was also found that the mean score for the domain Time Spent with Doctor is 3.67 which is the lowest among all domains. This finding corresponds to a local study done by Ganasegeran et al 2014 [4], whereby the patients had lowest satisfaction in terms of service quality particularly the time spent with doctors. This may be due to the large number of patients per day attending the clinic with limited number of doctors on duty.

There is very limited study in primary care settings that study and describe each item in PSQ-18. In our study, we further analyzed each question in the PSQ-18 and it was found that the highest level of satisfaction was recorded for Item 11 (Doctor was friendly and courteous) under the domain of Interpersonal Manner. This shows that doctors in IIUM Family Health Clinic have very good akhlaq and practice the good values of a Muslim doctor when treating the patients. Meanwhile, among all questions in PSQ-18, item 9 (waiting for too long for doctor to arrive) under the domain of Accessibility and Convenience had the lowest satisfaction score with mean score of 3.19, whereby about 30% of the respondents agreed to this statement. This corresponds to a study done by Ifediora and Rogers, 2017 whereby about 34% of their respondents agreed to the statement, and item 9 had the lowest mean score of 3.33 as compared to other domains in PSQ-18.

Association between sociodemographic and socioeconomic factors with level of patient satisfaction

Meanwhile most local studies done previously look into the associations between the overall patient satisfactions with the patients' sociodemographic characteristics, very few studies analyze the association between each domain in the PSQ-18 with the sociodemography of the patient. In our study, it was found that out of all variables studied; only marital status was significantly associated with the overall patient satisfaction. This coincides with one study done in Nigeria which found an association between the marital status of the patient and their satisfaction towards the health clinic. However, there were also studies that did not find any significant association between all sociodemographic characteristics and patient satisfaction [1].

Although there are no local study at primary care settings describing the association of each domain in PSQ-18 with the sociodemographic factor of the patients, our study analyzed this

matter and found a few significant associations. The age of the patient is significantly associated with the domain Financial Aspect and Time Spent with Doctor. Younger patients were found to be more satisfied with the financial aspect as compared to older-aged group patients; this may be because most younger-aged patients are students or staffs from IIUM who do not have to pay for most of the service and consultation. Older patients, aged 50-60 years-old were found to be more satisfied with the time spent with doctor as compared to younger patients. This is comparable to a study done by Patel et al 2018, whereby older patients had highest satisfaction with the time spent with physician. A study done by Ariffin, Azraii and Kamaruddin 2017, found that the average consultation time in a primary care clinic in Malaysia was about 15 minutes per patient and the length of consultation time mainly depends on the patient's medical condition, whereby more time is spent with patients who have multiple problem with higher severity. This shows that older patients may have higher satisfaction with the consultation time with the doctor as they have more problems to be explored by the physician.

Marital status was significantly associated with the domain 'interpersonal manner' and 'financial aspect' in our study. Single patients were found to be more satisfied in both domains as compared to those who were ever married. This finding is contradicting other research whereby usually married people are generally more satisfied with the service and with life generally as compared to single or unmarried people. However in terms of financial stability, in a study carried out by Gorman, 2000, it was found that married men and women experience least satisfaction with their financial circumstances followed by those who were divorced, whereas those who were never married were found to be most satisfied with their financial status. This supports our finding whereby patients who were ever married (married or separated) gave lower satisfaction score in financial aspect as compared to patients who were single.

From our study, the patient's education level is also a significant association with the patient's general satisfaction towards the family health clinic. It was found that patients who had tertiary education had lower median satisfaction score as compared to those who had lower education (primary and secondary education). This is consistent with findings from other study which also found patient's education background as a significant association with their satisfaction [4]. Patients with higher education background may be less satisfied with the healthcare as they have higher knowledge and expectation.

Based on our study, the working status of a patient is a significant association with his satisfaction level in the aspect of finance, whereby patients who are students have the highest satisfaction score in financial aspect followed by pensioners, workers and non-workers. This is supported by a study done by Ifediora and Rogers 2017, which also discovered that patients who were students are more satisfied with the healthcare services financially. This may be due to the fact that students are exempted from service payment by the university; therefore they have no trouble financially in terms of receiving healthcare services from the clinic (Welfare Management Unit, Student Affairs and Development Division, IIUM).

Limitations

Several limitations are to be acknowledged in this study. One of the limitations is that the method used to obtain data is by questionnaire which is based on self-reporting system and therefore, is subjected to reporting and recalls bias. Secondly, although the sample size was

acceptable as per the calculations in the methodology section, it is still considered small and so the results calculated from it may be less sensitive and specific. Also, as the respondents are all patients waiting to receive treatment, it is unavoidable that some respondents may be too unwell to participate in the survey or may have answered the survey with leniency.

Strengths

The strength of this study is its good response rate, which may partly be due to their background of higher education and/or being affiliated with IIUM, making them more understanding in participating in research surveys. Also, among those respondents, there are very little missing values, which may be due to the conducive environment as well as ample time for patients to answer the questionnaires.

Conclusions

The mean score for the overall level of patient satisfaction among patients of the IIUM Family Health Clinic is 70.75 (78.6%). Overall satisfaction is significantly associated with marital status. Among the 7 domains, patients are most satisfied with doctors' interpersonal

manner and least satisfied with time spent with doctor. In terms of general satisfaction, educational level is significantly associated with level of satisfaction. In terms of doctors' interpersonal manner, ethnicity, religion and marital status are significantly associated with satisfaction level. In terms of financial aspects, age, marital status and working status are significantly associated. In terms of time spent with doctor, only age group is significantly associated. The other 3 domains have no significant associating factors.

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