ORIGINAL ARTICLE
CLIENTS SATISFACTIONS IN ISO CERTIFIED HEALTH CLINIC IN KLINIK KESIHATAN BANDAR BARU BANGI, SELANGOR AND ITS ASSOCIATED FACTORS.

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ABSTRACT

Background:	All healthcare services are moving towards quality management system including ISO 9000 due to pressure from various stakeholders involves and also to improve healthcare quality. The objective of this study was to measure the satisfaction level among the outpatients in ISO Certified Klinik Kesihatan Bandar Baru Bangi, Selangor. Also to identify the relations of patient's satisfaction with the sociodemographic factors and service dimensions such as general satisfactions, technical quality of clinic staffs, interpersonal aspect of clinic staffs, time with doctors, communications with clinic staffs and availability/accessibility of clinic.
Methodology:	A cross sectional study was carried out from February 2008 to Jun 2008 and a total of 240 respondents in the clinic were selected using universal sampling. Only those who are Malaysians aged 18 and above and complied with the inclusions criteria's were selected as the respondents to fill up the Patient's Satisfaction Questionnaire III.
Results:	The study found that the satisfaction level of the respondents in Klinik Kesihatan Bandar Baru Bangi, Selangor were remarkable with 78.8%.It has been shown that the predictor factors of total patient's satisfaction were general satisfaction (AOR=5.06, CI= 1.51-16.96), technical quality of clinic staff (AOR = 3.09, CI= 1.13-8.43), interpersonal aspect of clinic staff (AOR = 2.96,CI= 1.04-8.42), availability/accessibility of clinic (AOR = 9.38, CI= 9.37-87.95) and communication of clinic staff (AOR=17.90, CI=3.74-85.73) with the R^2 = 67.7%.
Conclusion:	The satisfaction level among the respondents in Klinik Kesihatan Bandar Baru Bangi, Selangor were remarkable with percentages of 78.8%. The study has shown that service dimensions factor influenced the patient's satisfaction such as general satisfaction, interpersonal aspect of staff, communication of staff, technical quality of clinic staff and availability/accessibility of clinic. It could have also been contributed by the implementation of ISO and it can only be confirmed by carrying out a comparison study of patient's satisfaction in clinics with and without ISO certification.
Keywords:	ISO certification, client's satisfaction, Health Clinic.

INTRODUCTION

Quality of care can be defined by many ways depends on the stakeholders involved in the industry[1]. It can be different from the view of the government, the share holders, the clinical and non-clinical staff, the patients and also the carers[2].

Patient's satisfaction has been used widely all over the world to assess the quality of services rendered in healthcare facilities. According to A. Blazevska, by assessing the patient's satisfaction, the health managers can identify / assess the components of quality care such as the structure, process and product of care as mentioned above[3]. Apart from patient's satisfaction survey, third party assessment such as standard developed by International Standard of Organization, accreditations can be used to measure quality achievements of healthcare institutions. (WHO)

Malaysian government has launched "Excellent Work Culture" in 1989 in order to have a paradigm shift among the government workforce and thus developing an excellent work culture which includes the implementation of the ISO standards in all government sectors. It is hoped that with this new quality management system, which has been used and established widely overseas, the services given by the government sector can be upgraded and thus reduce complaints and increase works efficiency. The system's implementation is monitored by Malaysian Administrative Moderniation (MAMPU). ISO certification of Public Service Department (JPA) will then be given to the agency which is eligible for certification[4].

Ministry of Health Malaysia as with others ministries have taken this initiative seriously. The Health Minister, Datuk Dr Chua Soi Lek in his speech in 2004, has mentioned by the year of 2008 that all government hospitals should be certified with ISO or accredited[5]. In Selangor, all health clinics except under the Kuala Selangor District Health Office have been ISO certified. The hypothesis was the patient's satisfaction level is higher in the clinic which has implemented quality management system such as certified by ISO.

METHODOLOGY

A cross sectional study was carried out at Klinik Kesihatan Bandar Baru Bangi, Selangor from Februari 2008 to Jun 2008. The universal sampling was used to select the respondent provided they agreed to participate, aged 18 and above, Malaysians and well versed in Bahasa Melayu or English and at least has come and seek treatment twice in the clinic for the past 6 months. A total of 240 respondents were eligible.

Variable

Dependent variable was total patient satisfaction. Independent variables were sociodemographic factors and service dimensions. Sociodemographic factors such as sex, age, ethnicity, and education level and occupation type. Service dimensions as in the Patient Satisfaction Questionnaire III were general satisfaction, technical quality of clinic staff, interpersonal aspect of clinic staff, time with doctors, communications with clinic staff, assesibility/availability of clinic.

Instrument and data collection

The questionnaire used in this study was the modified version of Patient Satisfaction Questionnaire III by ommiting the financial part. The reliability of the questionnaires is good as it has been shown by the Cronbach's alpha (ranging from 0.77 to 0.88. Cronbach's α (alpha) is a coefficient of **reliability** and it is commonly used as a measure of the **internal consistency** or **reliability** of a **psychometric test score** for a sample of examinees.

The questionaire was divided into 2 parts. Part one consists of sociodemographic factors and part two consists of service dimensions. Service dimensions further divided into 6 parts, they are general satisfaction (6 questiones), technical quality of clinic staff (10 questiones), interpersonal aspect of clinic staff (7 questiones), time with doctors (2 questiones), communications with clinic staff (5 questiones) and assesibility/availability of clinic (12 questiones). Likert-type five-point scale was used. There were positive and negative questions. For positive questions scale 1 -strongly not agree, 2- not agree, 3- not sure, 4- agree, 5- strongly agree while negative questions the score were the other way round. Scales 1 -strongly agree, 2- agree, 3- not sure, 4- not agree, 5- strongly not agree.

Data analysis

The data were analysed using SPSS version 13 with Chi-square test, Mann Whitney Test and Logistic Regression analysis.

RESULT

Level of satisfaction by sociodemographic factor

In this study, the female respondent in Bandar Baru Bangi clinic were more satisfied with 79.1% however there is no significant statistical relationship with p value 0.90. Malays were more satisfied 79.3% with p value=0.59 compared with non Malays.

For those with primer level of education were shown to be more satisfied with percentage of 83.3%, with p value=0.06.Respondent who self employed shown to have highest satisfaction with 100% and p value of 0.03 compared with those who works in private sector, government sector and other category.

From this analysis, it has been shown that sociodemographic factors which has been shown statistically significant with p value <0.05 are those who are self employed. Please refer Table 1 and Table 2.

Table 1 Level of satisfaction by sosiodemographic factors

Sociodemographic factor	Satisfy (%)	Not satisfy (%)	χ^2	P value
gender (n=240)				
• Male	87 (78.4)	24 (21.6)	0.02	0.90
• Female	102 (79.1)	27 (20.9)		
	189	51		
Ethnic (n=240)				
• Malay	158(79.3)	41 (20.7)	0.29	0.59
• Non Malay	31(75.6)	10 (24.4)		
	189	51		
Age				
Median	36.0	33.0	-1.270***	0.204
Interquartil range	18.0	12		
	189	51		
Level education (n=240)				
• Primer	105(83.3)	21 (16.7)	3.30	0.06
• Non primer	84 (73.6)	30 (26.4)		
	189	51		
Occupation level (n=240)				
• unemployed	17 (81.0)	4 (19.0)	6.14**	0.09
• Pensioner	9 (75.0)	3 (2.0)		
• Working	132 (75.9)	42 (24.1)		
• Housewife	31 (93.9)	2 (6.15)		
	189	51		
Occupation type (n=240)				
• Privte sector	54 (71.1)	22 (28.9)	8.70**	0.03*
• Govt.sector	65 (76.5)	20 (23.5)		
• others	57 (86.4)	9 (13.6)		
• self-employed	13 (100.0)	0 (0.0)		
	189	51		

* significant at p < 0.05
** Fisher Exact Test
*** z value

Table 2 Satisfaction by general satisfaction dimension

General satisfaction	total	satisfaction		
	Satisfied (%)	Not satisfied (%)	χ²	P value
Satisfied	88 (92.6)	7 (7.4)		
			18.10	0.00
Not satisfied	101 (69.7)	44(30.3)		

significant at p < 0.05

Level of satisfaction according to service dimensions as in PSQ III questionnares

The study had shown that 78.8 % of respondents had satisfied with the service dimensions. Please refer Table 2 to table 8.

Table 3 Satisfaction by technical quality of clinic staff dimension

quality of clinic staff dimension	total	satisfaction		
	Satisfied (%)	Not satisfied (%)	χ²	P value
Satisfied	141 (86.5)	22 (13.5)	18.25	
				0.00
Not satisfied	48(62.3)	29 (37.7)		

significant at p < 0.05

Table 4 Satisfaction by interpersonal aspect of clinic staff dimension

interpersonal aspect of clinic staff	total	satisfaction		
	Satisfied (%)	Not satisfied (%)	χ²	P value
Satisfied	162 (85.7)	27 (14.3)	25.77	0.00*
Not satisfied	27 (52.9)	24 (47.1)		

significant at p < 0.05

Table 5 Satisfaction by communication of clinic staff dimension

communication of clinic staff	total	satisfaction		
	Satisfied (%)	Not satisfied (%)	χ²	P value
Satisfied	182(86.3)	29 (13.7)	58.79	0.00
Not satisfied	7(24.1)	22 (75.9)		

significant at p < 0.05

Table 6 Satisfaction by time with doctor dimension

time with doctor	total	satisfaction		
	Satisfied (%)	Not satisfied (%)	χ²	P value
Satisfied	125 (90.6)	13 (9.4)	27.15	0.00
Not satisfied	64(62.7)	38(37.3)		

significant at p < 0.05

Table 7 Satisfaction by availability/assesibility of clinic dimension

availability/assesibility of clinic	total Satisfied (%)	satisfaction Not satisfied (%)	χ^2	P value
Satisfied	161 (94.7)	9(5.3)	88.64	0.00*
Not satisfied	28 (40)	42 (60)		

significant at p < 0.05

Table 8 Satisfaction by total score of all dimensions

total score of all dimension	number	Percent (%)
Satisfied (%)	189	78.8
Not Satisfied(%)	51	21.2

Factors influencing the patients' satisfaction

Logistic regression analysis was used to analyse all the independent variables which shown to be statistically significant and also the p value less than 0.2. Bivariate analysis shows type of occupation in sosiodemographic factor had statistical significant with satisfaction level, however not in logistic regression analysis.

While all of the service dimensions such as general satisfactions, technical quality clinic staff, interpersonal aspect of clinic staff, communication with clinic staff and availability/assesibility of clinic had shown to have a significant relationship with total patient satisfaction except time with doctor. (Table 9).

Table 9 The predictor of patient's satisfaction

Factor		β Regression coefficient	Standard error	P value	Adjusted Odd ratio	95% confidence interval
Education level						
• [non primer}						
• Primer	1	0.522	0.503	0.29	1.68	0.63-4.52
Technical quality of clinic staff	1	1.131	0.618	0.03*	3.09	1.13-8.43
Time with doctor	1	0.405	0.799	0.44	1.50	0.54-4.18
Communication with doctor	1	2.885	0.533	0.00	17.90	3.74-85.73
interpersonal aspect of clinic staff	1	1.086	0.511	0.04*	2.96	1.04-8.42
General satisfaction	1	1.62	0.618	0.01*	5.06	1.51-16.96
Availability/accesibility	1	3.357	0.571	0.00*	9.38	9.37-87.95
Type of job						
• [government servant]						
• non-government servant	1	0.724	0.609	0.23	0.48	0.14-1.59
Age		0.028	0.025	0.26	1.02	0.97-1.08
constant		-5.58	1.501	0.00	0.04	0.97-1.08

significant at p < 0.05
[ ] = reference

DISCUSSION

In this study, female was more satisfied compared to male, however this finding shown to be not stastically significant. AL Qatari and Haran[6] in Saudi Arabia as well as study done in Sweden by Rahmqvist[7] had also found the same result as well as a study in Canada[8].

In terms of age, it was found that older respondents were more satisfy than the younger respondents but not stastically significant. The same result yield by a study done by AL Qatari and Haran in Saudi Arabia[6] and a study done in Canada[8].

There were no significant relationships between ethnicity and patient satisfaction in this study. It is similar finding with a study done by Dyah Pitaloka[9] and study carried out by Siti Aula[10] in Hospital University Kebangsaan Malaysia in 2005. However, in another study carried out by Suriati in Negeri Sembilan shows that non Malay are more satisfied compared to malays and the finding is significant[11]. The same findings shown in South Africa that White with higher socioeconomic status reported 1.5 times more satisfied as compared with the Blacks and those who are in low category economic status[12].

Housewives were the most satisfied compared to pensioner, those who were working and not working but this finding was not significant. The same result shown by Margaret et al in United Kingdom[13] but Dyah Pitaloka found that working people were more satisfied than those not working but it was not significant[9].

Those who are self employed were more satisfied compared with those who works in private sector, government and other type of occupation and this findings was significant. However, Suriyati Aziz found that those who works in government sector were more satisfied compared with those who work in private sector[11].

Those with primary level of education were more satisfied compared with others, however logistic regression showed no influence in total patient satisfaction. In a study conducted by Suriyati found those with primary level of education was more satisfied compared with those who had no formal education[11].

In logistic regression analyis, respondents who were satisfied with availability/ accessibility of clinic are 9.38 more likely to be satisfied in total satisfaction. Long and Jiwa et al also found that this dimension had influence with patient's satisfactions significantly[14] as well as by Andaleeb et al in Bangladesh[15].

Communication of clinic staffs also had significant relationship with patient satisfaction. This is inline with Tasso et al who found that 75% of patient had mentioned that good communication between patient and healthcare provider plays an important role in their satisfaction[16]. Branson et al who had carried out journals analysis had found that communication of the staff was the highest factors that influence patient satisfaction[17].

Time with doctor was found not to be a predictor of patient satisfaction in this study. Branson et al found it to be the second most influenced[17]. Ogden et al found that desire for more time did not influence patient satisfaction[18] but what patient required was quality time. Tasso et al found that to increase patient satisfaction[16], it was advisable for doctor to ask patient at the end of consultation if there is anything they would like to enquire further.

In this study, those who satisfy in technical quality of doctor are 3.09 times predicted to be satisfied in the total patient satisfaction. Branson et al found that technical quality of doctor or competency was the third important factor that influences patient satisfaction[17].

In this study, interpersonal aspect shown to be a predictive factor in patient satisfaction. It was supported by Suriyati Aziz[11] and also Siti Aulia Turmidi who found that the perception of interpersonal aspect also influence patient satisfaction in the multivariate analysis[10]. Aldana et al found that rural citizen in Bangladesh found that courtesy and behaviour of clinic staff had great impact on their level of satisfaction[19]. The same result found by Andaleeb et al[15]. Tasso et al also found that interaction between patient and healthcare providers will relate to high level of satisfaction[16].

The percentage of satisfaction in this study is more than 70%. It could be also be influenced by the implementation of ISO system as study shown by Suriyati Aziz. However, not many studies in Malaysia shows

high percentage of patient satisfaction, for example, a study by Nor Hayati shows that patient's satisfaction percentages were low and almost the same among the surgical and medical inpatients in the accredited and non accredited hospitals in Selangor[20].

LIMITATION

The number of clinics involved in the study was limited. The method also should involve a qualitative measure to gather clearer informations and factors associated with patient's satisfaction[16]. Time frame for form filling should also be informed. There was a study shown that time frame in completing the questionnaires had some influence in patients' satisfaction as claimed by Tasso et al[16].

SUGGESTION

Staffs and healthcare providers should be sent to short and long term courses in areas of handling patients, current clinical knowledges or advance methodology to improve the quality care. The clinic should conduct patient's satisfaction survey regularly in order to identify the prime concern of patients and improvement activities could be executed and therefore it is hope to increase patient's satisfactions. The result could also be related to the clinic having implemented ISO system. A further comparative study should be carried out to look at the role of ISO certified versus Non ISO certified clinic with regards to patient satisfaction.

CONCLUSION

The respondents had shown high level of satisfaction with 78.8%. The respondents also have achieved higher satisfaction in all service dimensions. In the present study, the patient's satisfaction is influenced only by services dimensions such as interpersonal aspect of clinic staff, technical quality of clinic staff, availability/assesibility of clinic, general satisfaction and communication with clinic staff.

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