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Determinants of Patient's Satisfaction towards Hospital Services in a Specialist Centre

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ABSTRACT

Patient satisfaction plays a crucial role in assessing the quality of services provided by healthcare services. The purpose of the present study was to determine the factors influencing patient satisfaction towards services of a specialist medical centre. A cross sectional study was conducted among 300 patients attending a semi-private multidisciplinary specialist centre in Malaysia. They were provided with a set of self-administered questionnaires on patient satisfaction with the services received at the facility. Patient satisfaction was divided into three main components: patient characteristics, delivery of services and hospital characteristics. Additional qualitative comments were also obtained. The mainstay of the analysis was multivariate logistic regression. Altogether, 273 (91.2%) of the patients rated their overall satisfaction as "good" or "very good". Hospital characteristics (i.e., cleanliness; OR: 30.58 (95% CI: 3.52 – 265.79), hospital appearance; OR: 12.69 (95% CI; 1.51 – 106.53) had the strongest influence on the patient's overall satisfaction. The findings revealed that the reason a majority of patients liked the hospital was related to good quality of services (18.7%), comfort (21.9%) and the friendly staff (8.8%). Hence, hospital characteristics are the most important determinants of overall patient satisfaction. In addition, the quality of delivery services and a friendly staff should also be considered when improving hospital services in a multidisciplinary specialist centre.

Keywords: Hospital characteristics, patient satisfaction, quality of services, specialist centre

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INTRODUCTION

In the service industry, customer satisfaction is achieved when expectations of the customer match performance (Aagja & Garg, 2010). In the healthcare setting, patients are regarded as customers, and their satisfaction is achieved if their technical services and interpersonal care are met (Campbell, Roland, & Buetow, 2000).

Patient satisfaction is a multidimensional concept, which is currently not fully understood. Part of that concept includes patient perceptions of health service quality and aspects outside the control of health¬care professionals such as various hospital characteristics, e.g., teaching status, physical appearance and size (Finkelstein, Singh, Silvers, Neuhauser, & Rosenthal, 1998; MacAllister, Zimring, & Ryherd, 2016) and patient demographics (Young, Meterko, & Desai, 2000). The concept also includes various factors that may influence patient satisfaction, associated with the quality of service provided. For example, Chahal and Kumari (2010) suggested that patient perception of the quality of the hospital service are based on the following : physical environment (comprising ambient condition, social factor and tangibles), interaction quality (comprising attitude and behaviour, expertise and process quality), and outcome quality (comprising waiting time, patient satisfaction and loyalty). A study in Malaysia suggested five dimensions, including admission, medical service, overall service, discharge and social responsibility, as a distinct construct for hospital service quality (Amin & Nasharuddin, 2013). In addition, the patients' evaluation of the quality of services also indicated an interaction between patients and doctors, which then boosts the confidence of the patients regarding the quality of services provided by the hospital (Mohd Suki, Chiam Chwee Lian, & Mohd Suki, 2011). Nonetheless, factors associated with satisfaction also vary ac-cording to the setting (Thi, Briancon, Empereur, & Guillemin, 2002), suggesting that the results cannot easily be general¬ized to the setting of a specialist centre with various specialties.

Hence, in an increasingly competitive market environment with many choices for patients, it is vital for healthcare professionals to understand the most in¬fluential determinants of customer satisfaction, whether they are most affected by the quality of services provided by the healthcare professionals or by the alterable allocated physical environmental resources. This information can be used to adjust for such factors when comparing the performance of individual physicians or hospitals, based on satisfaction data.

Therefore, the objective of the present study was to assess satis¬faction ratings in relation to hospital characteristics, delivery of services and patient characteristics. The study was also aimed at understanding factors that may be associated with overall patient satisfaction.

MATERIALS AND METHODS

This is a cross-sectional study conducted in a semi-private multidisciplinary specialist centre in Malaysia. This clinical specialist centre comprised various specialties and sub-specialties, including inpatient and outpatient facilities. The centre has approximately 100 beds, three outpatient clinics, an Emergency department, an Operation Theatre and other related facilities. Data collection was conducted within 2 weeks, and participants were selected from each department via simple random sampling. Inclusion criteria were patients or visitors who came to the clinic or were admitted to the hospital and were able to read and understand Bahasa

Malaysia. Informed consent was obtained from the patients, and the present study was approved by the ethical review board of the university.

Measures

Patient satisfaction, socio-demographic characteristics, and waiting time were adapted from a previously validated survey comprising 37 items (Schoenfelder, Klewer, & Kugler, 2011). The survey was translated into Bahasa Malaysia, pretested and subjected to validity testing among 30 patients. Patient satisfaction regarding service and medical aspects of care was assessed through 15 items using a five-point ordinal rat¬ing (very poor, poor, acceptable, good and excellent). One item collected information concerning overall satisfaction using the same five response categories.

Other information was divided into three main components: patient characteristics, delivery of services and hospital characteristics. Data regarding patient characteristics included age, gender, number of prior hospitalisations and source of admis¬sion (e.g., specialist, self-admission and emergency). Hospital characteristics includ¬ed clinical facilities, whereas delivery of services included service efficiency, courtesy and treatment provided.

A comment section at the end of the questionnaire was aimed at eliciting some suggestions to improve the clinic.

Statistical Analysis

All the data was analysed using SPSS version 22. A P value of less than 0.05 was considered significant. The data was categorized into five groups in which the highest rating was 5 (very good), and the lowest rating was 1 (very poor). Since the data were skewed towards higher satisfaction, a non-parametric test, such as the Mann-Whitney U test, was conducted for two variables, and the Kruskal-Wallis test was conducted for more than two variables. The dependent variables (overall satisfaction) were dichotomised into dissatisfied (fair/poor/very poor) versus satisfied (good/very good). All associations were considered significant at $P \leq 0.05$.

All variables were analysed by simple logistic regression to identify the association between the factors under study and customer satisfaction. Next, multiple logistic regression was performed, controlling for all sociodemographic characteristics using the Forward Method.

The handwritten comment section was manually analysed by the identification of codes and common themes. The research team resolved any discrepancies through discussions. The themes from the matrices and coding were identified and agreed upon by all researchers.

RESULTS

A total of 300 patients participated in the present study. The ages of the patients ranged from 9-75 years, with a mean age of 41.2 years. The majority of the patients were Malay and married, accounting for the most of the patients, 86.7% (n = 26) and 81.0% (n = 243), respectively. Cardiology had the highest number of patients, which was 119 (42.3%), followed by surgery and primary care departments. For waiting time, the pharmacy had the highest number, which was 85 (28.3%), followed by the clinic, 42 (14%), the registration counter, 16 (5.3%) and

the laboratory, 1 (0.3%). Some of the patients provided suggestions on how to improve the clinic; a total of 25 (8.3%) patients suggested having more car parks, while 15 (5.0%) patients suggested the addition of more chairs in the waiting area (Table 1).

Table 1
Relationship between patient and hospital characteristics and overall patient satisfaction

Variables	Patient nos (%)	Satisfaction Ratings	*P* Value
Age (years)			
< 10	1 (0.3)	5.00	0.42a
11-20	8 (2.7)	4.42	
21-30	45 (15.3)	4.17	
31-40	41 (13.9)	4.26	
41-50	46 (15.6)	4.27	
51-60	73 (24.8)	4.12	
61-70	60 (20.4)	4.16	
> 70	20 (6.8)	4.35	
Quantity of hospitalisation			
None	73 (25.1)	4.06	<0.01a
1-2 times	91 (31.3)	4.36	
3-4 times	34 (11.7)	4.15	
> 5 times	93 (31.9)	4.16	
Patient			
Inpatient	54 (18.1)	4.54	<0.01b
Outpatient	244 (81.9)	4.13	
Working status		----	0.16a
Employed	153 (51.3)	4.27	
Unemployed	86 (28.9)	4.12	
Pensioner	59 (19.8)	4.20	
Race		----	0.02a
Malay	260 (86.7)	4.19	
Chinese	18 (6.0)	4.59	
Indian	19 (6.3)	4.11	
Others	3 (1.0)	4.00	
Marital Status		----	0.28a
Married	243 (81.0)	4.19	
Widowed	1 (0.3)	5.00	
Divorced	13 (4.3)	4.31	
Single	43 (14.4)	4.28	

Table 1 *(continue)*

Highest Education Level		----	0.03a
Primary School	42 (14.1)	4.43	
Secondary School	111 (37.2)	4.12	
Diploma or Degree	115 (38.6)	4.18	
Master's or Higher	30 (10.1)	4.28	
Department		----	0.01a
Surgery	31 (11.0)	4.52	
Internal Medicine	19 (6.7)	4.31	
Primary Care	29 (10.3)	4.36	
Paediatrics	4 (1.4)	4.25	
Obs and Gyn	15 (5.3)	3.87	
Cardiology	119 (42.3)	4.16	
Respiratory	7 (2.5)	4.20	
Nephrology	1 (0.3)	5.00	
Urology	0 (0.0)	----	
Endocrinology	19 (6.7)	4.00	
Radiology	0 (0.0)	----	
Rehab	3 (1.1)	4.33	
Others	34 (12.1)	4.19	

Notes: a Kruskal-Walli test; and b Mann-Whitney U test

Table 2
Bivariate analysis of satisfaction ratings

Satisfaction Measure	All Patients[a]	Satisfied Patients[b]	Dissatisfied Patients[C]
Clinic Facilities[d]			
State of Repair/maintenance***	4.14	4.25 (155)	3.78 (102)
Outside appearance*	4.30	4.22(152)	3.71(103)
Cleanliness*	4.34	4.23(153)	3.73(104)
Ventilation**	4.30	4.18(147)	4.56(189)
Services and efficiency			
Front counter staff*	3.94	4.24(121)	4.00(154)
Nursing staff***	3.93	4.26(157)	3.84(108)
Lab staff***	3.94	4.26(158)	3.91(117)
Pharmacy staff*	3.84	4.25(155)	4.02(128)
Maintenance staff**	3.83	4.26(157)	4.02(129)
Admission			
Admission procedure***	3.75	4.29(161)	3.99(125)
Information about the*** admission and costs	3.88	4.28(160)	4.03(129)
Satisfaction with nursing care***	3.66	4.28(160)	3.95(121)
Satisfaction with clinic*** brochure and information	4.18	4.31(163)	4.01(126)

Table 2 *(continue)*

Care and Treatment Provided			
Information provided on your care and treatment options by your doctor & staff*	4.06	4.24(154)	4.03(129)
Pre-hospital discharge			
Preparation for discharge from hospital***	3.44	4.30(162)	4.06(133)
Instructions regarding medications*	3.48	4.26(157)	4.11(138)
Information provided on how to access relevant community services***	3.46	4.27(158)	4.13(140)
Satisfaction with clinic brochures & information*	3.81	4.27(158)	4.12(140)

[a]Overall group median

[b]Overall satisfaction of excellent and good; Grouped Median (Mean Rank)

[c]Overall satisfaction of fair, acceptable, poor and very poor; Grouped Median (Mean Rank)

[d]Differences between satisfied and dissatisfied patients using the Mann-Whitney U test

*<.05; **<.01; ***<.001

Overall, 273 (91.2%) of the patients rated the overall satisfaction as "good" or "very good". Table 2 shows that the highest group median was 'cleanliness' (4.34), followed by 'ventilation' and 'outside appearance', which had the same group median of 4.30. The lowest mean score was obtained for 'preparation for discharge from hospital' (3.44), followed by 'information provided on how to access relevant community services' (3.46). Overall, the patients were significantly satisfied with the overall services in all sections (P<0.05).

Table 3
Multivariate analysis of overall satisfaction based on different categories

Variables	Odds Ratio (95% CI)	*P* Value
Cleanliness	30.58 (3.52 – 265.79)	<0.01
Outside Appearance	12.69 (1.51 – 106.53)	0.02
Admission procedure	8.80 (2.59 – 29.88)	<0.01
State of repair/maintenance	8.74 (2.24 – 34.01)	<0.01
Nursing staff services	6.96 (1.98 – 24.63)	<0.01
Lab staff services	5.29 (1.62 – 17.28)	<0.01
Satisfaction with nursing care	4.13 (1.18 – 14.48)	0.03
Maintenance staff services	3.99 (1.35 – 11.79)	0.01
Information about admission cost	3.59 (1.14 – 11.35)	0.03
Pharmacy staff services	3.10 (0.87 – 11.05)	0.08
Preparation for discharge from hospital	3.03 (1.03 – 8.92)	0.04

Note: CI, Confidence Interval

Table 3 displays the multivariate logistic regression of the patient satisfaction based on the various categories, after controlling for sociodemographic characteristics. Eleven variables were identified as positively associated with overall satisfaction. Cleanliness had the highest association, with an odds ratio of 30.58 times satisfied customers compared with non-satisfied, followed by the outside appearance of the hospital. The lowest was preparation for discharge from the hospital.

Ninety-one participants answered the comments section. The findings revealed that the results were divided into these three different themes: good infrastructure of the hospital and environment, friendly services from healthcare professionals, and quality healthcare. Among the subthemes that emerged, the majority reported that the reason they liked the hospital is its good quality services (18.7%), comfort (21.9%) and friendly staff (8.8%).

DISCUSSION

The study identified 11 predictors of overall satisfaction after attending a multidisciplinary specialist medical centre. The findings indicated that the variables related to hospital characteristics have a greater impact on satisfaction rather than delivery services and patient characteristics.

Factors Influencing Patient Characteristics

With regards to sociodemographic characteristics and satisfaction rating, the number of previous hospitalizations was significantly associated with satisfaction. Individuals who were admitted at least once were more satisfied compared with no previous admission. Nonetheless, with an increasing number of admissions, the satisfaction level was reduced. This finding is supported by other studies (Quintana et al., 2006). Additionally, the overall satisfaction is dependent on the level of education. The results of the present study showed lower educated individuals were more satisfied. This is in contrast with another study, which revealed no such differences in education level (Ramsey et al., 2012). There is no direct explanation for this difference, it is postulated that less-educated individuals were more attracted to the hospital appearance compared to the private sector.

Factors Influencing Hospital Characteristics

The present study revealed that the most important determinant of a good customer satisfaction is the physical appearance of the health facilities. This finding is supported by prior studies which found that patients were more concerned about comfort and cleanliness after subsequent admission (Quintana et al., 2006). Similarly, Soleimanpour et al. (2011) highlighted that cleanliness is an important contributor to patient satisfaction, particularly in the emergency department. Thus, maintaining the comfort and cleanliness is important to promote good patient perception and impressions towards the hospital services. Patients also emphasized other physical characteristics, such as good lighting, ample car park and large waiting areas, to improve their satisfaction. However, this was in contrast to the findings of Schoenfelder, Schaal, Klewer and Kugler (2014) who suggested that patient assessment of the delivery of services had

a greater impact on the overall satisfaction compared with the hospital characteristics. Thus, the quality of services provided by the clinical centre in the present study was comparable to that of other private hospitals, hence it was not a prominent factor in the present study.

Factors Influencing the Delivery of Care

With regard to delivery of care and communications, the present study revealed that this factor was the second important contributor to patient satisfaction after hospital characteristics. An organized procedure has a positive effect on satisfaction as it helped to ensure a good stay at the hospital (Pini et al., 2014). In the present study, the highest contributors to the delivery of care include the admission procedure staff, such that a smoothly running admission enables the patients to feel guided, particularly involving the initial stage of hospital admission or clinic appointments. This factor apparently has positive effects on satisfaction. The waiting time and procedures throughout the visit are also important. Previous findings suggested that a long waiting time can induce a negative effect on the quality of the hospital (Kumari, Amberkar, & Nandit, 2012). Hence, increasing the number of workers and opening more counters were part of the measures suggested by the respondents. Furthermore, good communication with patients is essential to good patient satisfaction, consistent with many previous prior studies (Mira, Tomás, Virtudes-Pérez, Nebot, & Rodríguez-Marín, 2009; Schoenfelder, Klewer, & Kugler, 2011). Lastly, the results of the present study also highlight the need for providing comprehensible information prior to and after discharge. Yet, the intensity of this relation was weak compared with the other variables in the multivariate regression model as also observed in other studies.

The study has some limitations. Firstly, the majority of the patients at the specialist centre were Malays, hence it may be difficult to generalize these results to other ethnic groups. Secondly, most of the data was obtained from the cardiology department, as this department has the most number of patients, and this may lead to bias in the overall results, particularly in terms of the services provided. The present study would benefit better from an equal distribution of the number of patients from each category. Lastly, the duration of the present study was too diverse. It would be better in the future to strictly focus on certain units, to ensure more targeted interventions or improvements in the quality of services provided. Nonetheless, the strength of the present study includes a good participation rate among respondents, and this study is the first on customer satisfaction in a specialist centre in Malaysia. Future studies can focus on other hospital settings or clinic-based primary care settings, as the expectations of customers might differ.

CONCLUSION

Overall, high levels of satisfaction were recorded as well as comments. The study concludes that the most important determining factor of patient satisfaction is the physical environment of the hospital. In addition, the delivery of care and friendly staff should also be emphasised to further enhance satisfaction.

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