

A Cross-Sectional Study on Patient Satisfaction with Universiti Kebangsaan Malaysia Medical Centre (UKMMC) Primary Care Clinic

HIZLINDA T, TEOH SY, SITI NURBAIYAH KE, AZRINA AS,
MOHAMAD HAFIZZUDIN MT, CHANG LH, NORALIZA MA

*Department of Family Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia,
Jalan Yaakob Latif, Bandar Tun Razak, 56000 Cheras, Kuala Lumpur, Malaysia*

ABSTRAK

Kepuasan pesakit memainkan peranan yang penting dalam memastikan penggunaan perkhidmatan jagaan kesihatan, rawatan berterusan dan kepatuhan terhadap rawatan. Maka, kajian ini bertujuan untuk menentukan tahap kepuasan pesakit dengan perkhidmatan yang diberikan oleh klinik jagaan primer PPUKM. Satu kajian deskriptif keratan rentas yang melibatkan 317 pesakit yang hadir ke klinik tersebut telah dijalankan daripada Februari sehingga Mac 2011. Mereka telah dipilih melalui pensampelan rawak secara sistematik. Dengan menggunakan satu borang soal-selidik kepuasan pesakit-46 (PSQ-46) yang telah disahkan di dalam versi Inggeris dan Melayu, kepuasan keseluruhan dan kepuasan dengan lima sub skala (doktor, jururawat, aksesibiliti, kemudahan dan temujanji) diperiksa. Sebahagian besar pesakit (93.1%) secara umumnya berpuas hati dengan perkhidmatan keseluruhan. Di antara lima skala sub, pesakit sangat berpuas hati dengan doktor (96.5%), tetapi hanya 35.6% pesakit berpuas hati dengan kemudahan. Jumlah pesakit yang berpuas hati dengan sub skala yang lain adalah: 86.1% (temujanji), 82.0% (jururawat) dan 68.1% (aksesibiliti). Terdapat perkaitan yang ketara di antara setiap skala sub dan kepuasan keseluruhan ($p < 0.001$ untuk doktor, jururawat, aksesibiliti dan temujanji; $p = 0.014$ untuk kemudahan). Walaubagaimanapun, perkaitan sedemikian tidak kelihatan di antara faktor-faktor sosio-demografi dan kepuasan keseluruhan ($p = 0.200$ untuk jantina, $p = 0.108$ untuk umur, $p = 0.894$ untuk kaum, $p = 0.146$ untuk tahap pendidikan, $p = 0.653$ untuk status pekerjaan, $p = 0.867$ untuk jenis pekerjaan, dan $p = 0.623$ untuk pendapatan keluarga). Kesimpulannya, kebanyakan pesakit merasakan kemudahan klinik adalah substandard tetapi mereka mempunyai tahap kepuasan keseluruhan yang tinggi. Namun, strategi untuk memperbaiki kemudahan masih diperlukan kerana ia dapat meningkatkan lagi kualiti rawatan dan kepuasan pesakit.

Kata kunci: jagaan kesihatan primer, kepuasan pesakit, kualiti penjagaan kesihatan, Malaysia

Address for correspondence and reprint requests: Dr. Hizlinda Tohid, Department of Family Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Cheras, Kuala Lumpur. Tel: 03-91456119. Fax: 603-91456680. Email: hizlinda2202@gmail.com.

ABSTRACT

Patient satisfaction plays a crucial role in ensuring utilization of healthcare services, continuity of care, and compliance towards treatment. Thus, this study aimed at determining the level of patient satisfaction with the services provided by the UKMMC primary care clinic. A descriptive cross-sectional study involving 317 patients attending the clinic from February to March 2011 was carried out. They were selected through systematic random sampling. Using a validated self-administered Patient Satisfaction Questionnaire-46 (PSQ-46) in English and Malay versions, general satisfaction and satisfactions with five different subscales (doctors, nurses, accessibility, facilities and appointment) were assessed. A majority of the patients (93.1%) were generally satisfied with the overall services. Among the five subscales, patients were most satisfied with the doctors (96.5%), but only 35.6% of the patients were satisfied with the facilities. The proportions of patients who were satisfied with other subscales were: 86.1% (appointment), 82.0% (nurses) and 68.1% (accessibility). There was a significant association between each of the subscales and the general satisfaction ($p < 0.001$ for doctors, nurses, accessibility and appointment; $p = 0.014$ for facilities). However, such relationship was not demonstrated between the socio-demographic factors and the general satisfaction ($p = 0.200$ for gender, $p = 0.108$ for age, $p = 0.894$ for race, $p = 0.146$ for educational level, $p = 0.653$ for job status, $p = 0.867$ for type of occupation, and $p = 0.623$ for family income). In conclusion, many patients perceived that clinic facilities were substandard but they still had a high level of general satisfaction. Nevertheless, strategies in improving the facilities are still required as it will contribute to the quality of care and patient satisfaction.

Key words: primary health care, patient satisfaction, quality of health care, Malaysia

INTRODUCTION

Primary healthcare plays a central role in healthcare systems worldwide. It is 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. In Malaysia, primary care services are provided by public and private primary care clinics. The public primary care sector is mainly funded by the Ministry of Health Malaysia (MOH). In 2011, there were about three times more

registered private primary care clinics compared to the public primary care clinics; 6,589 registered private clinics versus 1,973 public clinics (Ministry of Health Malaysia 2012). Apart from the private and MOH-funded public primary care sectors, public universities offering medical courses have their own hospitals and primary care clinics. These facilities are funded by the Ministry of Higher Education Malaysia and function as centres to carry out undergraduate and/or postgraduate training, clinical services to nearby communities, as well as medical research.

Primary healthcare places great emphasis on patient-centred care, promoting providers to be more responsive in identifying and meeting patients' needs, preferences and expectations. Generally, patients' experience and perception that meet or exceed their expectations has been the concept of patient satisfaction as proposed by Parasuraman et al. (1985). However, this concept focuses on functional (process) dimension of a service. This dimension is described as how a service is delivered such as provider's reliability, responsiveness, assurance and empathy, physical facilities, as well as equipment. However, the concept of patient satisfaction has evolved to becoming more complex that includes technical aspects of the service (i.e. service outcomes and provider's competence) (Wan Rashid & Jusoff 2009, Mpinga & Chastonay 2011).

Assessing patient satisfaction is of paramount importance as it predicts patients' utilisation of health-care services and compliance to the treatment (Al-Eisa et al. 2005) as well as continuity of care (Donahue et al. 2005). Satisfied patients also tend to take an active role in their own healthcare (Donabedian 1997). Moreover, assessment of patient satisfaction with the services provided has been used as a measure of the service quality, allowing for identification of quality gaps and implementation of improvement strategies (Wan Rashid & Jusoff 2009, Mpinga & Chastonay 2011).

Studies on patient satisfaction has been extensively done worldwide since 1980's (Evans et al. 2007, Mpinga &

Chastonay 2011), while in Malaysia, a number of hospitals started to perform such studies a decade later (Haliza et al. 2005). However, the findings were not published (Haliza et al. 2005). Over the past 10 years, studies on patient satisfaction have been increasingly carried out in Malaysia. These studies were done in various healthcare settings i.e. in hospitals and primary care clinics, both public and private (Raja Jamaluddin 2001, Haliza et al. 2003, Yunus et al. 2004, Haliza et al. 2005, Noor Hazilah & Nooi 2009, Mohd Suki et al. 2009, Nor Hayati et al. 2010, Sharifa Ezat et al. 2010, Aniza & Suhaila 2011, Suki et al. 2011, Noor Hazilah 2012), various specialities (e.g. emergency department, dental, paediatrics, and obstetrics and gynaecology) (Pitalok & Rizal 2006, Saiboon et al. 2008, Aniza et al. 2011, John et al. 2011) and groups of patients (e.g. patients with osteoporosis, cleft palate, and orthognathic problems) (Siow et al. 2002, Noor & Musa 2007, Lai et al. 2010).

In Malaysia, most of the studies done in the primary care settings have showed high levels of patient satisfaction (78.8-92.3%), except a study by Haliza et al. (2005) that was carried out between 1996 and 1997 (Raja Jamaluddin 2001, Yunus et al. 2004, Haliza et al. 2005, Sharifa Ezat et al. 2010, Aniza & Suhaila 2011). Haliza et al. (2005) demonstrated an overall patient satisfaction rate of 3.8% and 19.4% among patients who visited the public clinics and the private clinics respectively. Perhaps, re-organisation of our primary healthcare system over the past 10 years has resulted in an increase in patient

satisfaction as demonstrated by recent studies (Yunus et al. 2004, Sharifa Ezat et al. 2010, Aniza & Suhaila 2011).

Factors that influence patients satisfaction can be generally divided into: (a) patient-related factors (e.g. age, race, gender and socio-economic status), (b) medical personnel-related factors (e.g. technical skills, time spent during a visit, communication, interpersonal relationship, and manners), and (c) system-related factors (e.g. accessibility, facilities, appointments, referrals, and continuity of care) (Hutchinson 1993, Haliza et al. 2003, Yunus et al. 2004, Haliza et al. 2005, Thiedke 2007, Sharifa Ezat et al. 2010, Aniza & Suhaila 2011). Hence, these factors are commonly being assessed in determining patient satisfaction. Many studies have shown that interpersonal relationship has greater influence on patient general satisfaction as compared to other influencing factors, such as system-related factors (e.g. accessibility, facilities, appointments, referrals, and continuity of care) (Mendoza et al. 2001, Gadallah et al. 2003).

Eventhough a substantial number of studies on patient satisfaction have been carried out in Malaysia, studies examining patient satisfaction in the university-based primary care clinics are still scarce. Furthermore, recent advances in the public primary healthcare and expected enhancement in patient expectation with service provision, prompt further studies to assess present patient satisfaction. Therefore, this study aimed to evaluate the level of patient satisfaction with services provided by the Universiti

Kebangsaan Malaysia Medical Centre (UKMMC) primary care clinic, assessing both general patient satisfaction with the overall service as well as their satisfaction with doctors, nurses, accessibility, facilities and appointments.

MATERIALS AND METHODS

This was a descriptive cross sectional study, carried out in the UKMMC primary care clinic from February to March 2011. A total of 317 patients were recruited through systematic random sampling. The sample size met the precision requirements (α) of 0.05 and confidence level of 95%. The proportion used in the sample size calculation was the one reported by Sharifa Ezat et al. (2010), which was 86.1%.

In this study, all patients aged 18 years and above, who had attended the clinic for at least one visit in the past, were eligible for participation. However, those who required emergency care or could not read English or Bahasa Malaysia (BM) were excluded. During the study period, every third patient who registered at the registration counter was approached. Those who met the inclusion criteria were invited as participants. However, if the patient did not fulfil the inclusion criteria, the next patient registered at the counter would be selected. This study received approval from the Research and Ethics Committee of the Universiti Kebangsaan Malaysia (FF-001-2011).

A validated self-administered Patient Satisfaction Questionnaire (PSQ-46) was used as it was specifically designed

to measure patient satisfaction with primary care services (Grogan et al. 1995). PSQ-46 was developed in the United Kingdom based on a qualitative study on factors affecting satisfaction with the primary care services. This study revealed 10 dimensions as follows: “doctor information getting, doctor information giving, doctor social skills, doctor competence, doctor time pressure, access (access to doctor, receptionist, emergency service and out-of-hours service), facilities (condition of waiting room and building), nurses (communication skills and interpersonal manners), receptionists/appointment (convenience and availability), and general satisfaction” (Grogan et al. 1995). The questionnaire assesses not only the functional dimension but also the technical dimension of the healthcare service. It includes measuring patients’ perception on doctor’s competency in performing thorough assessment and investigations, as well as prescribing treatment. Permission was obtained to use the PSQ-46 from the original author, Professor Sarah Grogan.

PSQ-46 comprises of 46 items with a five-point Likert ‘agree-disagree’ scale. These items are categorised into: general patient satisfaction (six items) and satisfaction with five different subscales including doctors (20 items), nurses (four items), accessibility (eight items), facilities (four items) and appointment (four items). This categorisation allows us to identify patient dissatisfaction in specific areas of the service (doctors, nurses, accessibility, facilities and appointment).

PSQ-46 assesses almost similar components of patient satisfaction

measured by Haliza et al. (2005) and Aniza & Suhaila (2011). These questionnaires were Patient Satisfaction Questionnaire II (PSQ II) and Patient Satisfaction Questionnaire III (PSQ III), both originally developed from the one by Ware and Snyder (1975). However, PSQ-46 does not have dimensions of ‘service charges’ and ‘continuity of care’. SERVQUAL is another instrument commonly used by many studies that examine consumer satisfaction with a broad range of services provided by various organisations (Ilhaamie 2010). The dimensions assessed by SERVQUAL are generic and focus on functional service quality. Many studies on patient satisfaction in Malaysia had used SERVQUAL but it was modified to meet the objectives of the studies (Yunus et al. 2004, Mohd Suki et al. 2009, Sharifa Ezat et al. 2010, Nor Hayati et al. 2010, Suki et al. 2011, John et al. 2011).

The original English version of PSQ-46 was translated into BM through forward and backward translation by two translators. Then, 10 participants examined the construct of BM-version questionnaire through face validation process. Subsequently, a pilot study was done on 30 respondents from the clinic. Reliability analysis of the pilot study showed a Cronbach’s alpha coefficient of 0.882.

The collected data were analyzed by using SPSS version 19.0. The findings of each subscale were categorized into satisfied and not satisfied. The median of each subscale ($[(\text{maximum score} - \text{minimum score}) \div 2] + [\text{minimum score}]$) was used as the cut-off point. All findings to demonstrate association

between variables were analyzed using Chi square test. However, when the assumptions for the Chi square test were not met, Fisher's Exact test was used. Statistical significance was set at $p < 0.05$.

RESULTS

A total of 317 respondents participated in this study, with a response rate of 77%. Majority of the respondents were female (64.7%, 205/317), Malays (67.2%, 213/317), aged between 35-64 years old (65.0%, 206/317), and received secondary education and above (89.6%, 284/317) (Table 1). More than half of the respondents (56.8%, 180/317) belonged to the working group, 33.4% (106/317) of the respondents worked in the government service and the other 26.2% (83/317) worked in the private sector. Approximately, two thirds of the respondents came from lower and middle-income families.

Majority of the respondents in this study were generally satisfied with the overall services (93.1%, 295/317), doctors (96.5%, 306/317), nurses (82.0%, 260/317), appointment (86.1%, 273/317), and accessibility (68.1%, 216/317) (Figure 1). However, only 35.6% of the respondents were satisfied with facilities.

There was no significant association between the socio-demographic characteristics and patients' general satisfaction (Table 2). Analysis of each subscale demonstrated significant association between each of the subscales and general patient satisfaction (Table 3). Overall, majority of the respondents who were satisfied

with doctors (95.1%, 291/306), nurses (97.7%, 254/260), accessibility of the service (97.7%, 211/216) or appointment system (98.2%, 111/113) were satisfied with the services generally. However, most of those who were dissatisfied with nurses (71.9%, 41/57), accessibility of the service (83.2%, 84/101), facilities (90.2%, 184/204) or appointment system (75.0%, 33/44) admitted to be generally satisfied as well. Only a third of the respondents who were not satisfied with the doctors were generally pleased and most of these respondents confessed their dissatisfaction with the overall services.

DISCUSSION

Overall, patients who attended UKMMC primary care clinic during the study period were generally satisfied with the services. This high level of satisfaction was similar with previous local studies done in primary care settings (Raja Jamaluddin 2001, Yunus et al. 2004, Sharifa Ezat et al. 2010, Aniza & Suhaila 2011). Only one study by Haliza et al. (2005), which was done between 1996 and 1997, showed extremely low levels of satisfaction with the services among patients in public (overall patient satisfaction rate of 3.8%) and private clinics (overall patient satisfaction rate of 19.4%). Improvements most probably held by the government in both sectors contributed to this increase in patient satisfaction over the past decade (Ariff & Teng 2002). Another reason to explain the high level of satisfaction found in this study is the 'generosity factor' of patients giving good score when answering a questionnaire (Kasalova

1995). This phenomenon can be explained by their fear of repercussion for giving genuine personal opinion, which may be construed as negative, despite reassurances that their future treatment would not be compromised (Angelopoulou et al. 1998, Coyle & William 1999, Noor Hazilah & Nooi 2009).

In our study, majority of the respondents expressed satisfaction with most of the areas of the service assessed (doctors, nurses, accessibility and appointment). The respondents were particularly satisfied with the doctors in terms of their communication skills, interpersonal manners and technical competence as assessed by the PSQ-46. This may be because the majority of the doctors in the UKMMC primary care clinics were registrars in training and family medicine specialists who optimally worked to realise the principles of family medicine, such as patient-centred and evidence-based

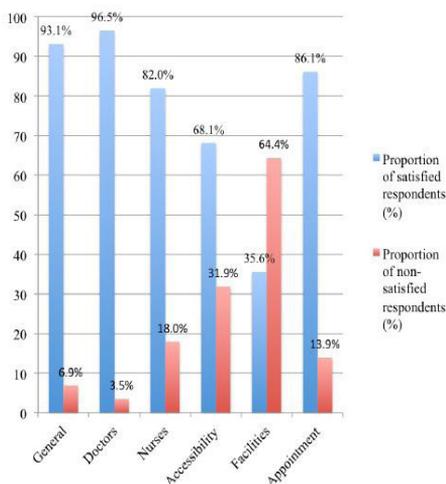


Figure 1: Proportion of respondents who were satisfied or not satisfied according to the domains of patient satisfaction

Table 1: Socio-demographic data of the respondents

Socio-demographic data	Frequency (N)	Percentage (%)
Gender		
Male	112	35.3
Female	205	64.7
Age (years)		
<35	73	23.0
35-64	206	65.0
>64	38	12.0
Race		
Malay	213	67.2
Chinese	77	24.3
Indian	24	7.6
Others	3	0.9
Educational level		
None	9	2.8
Primary school	24	7.6
Secondary school	149	47.0
Diploma/STPM	84	26.5
Degree and above	51	16.1
Job status		
Working	180	56.8
Not working	65	20.5
Student	14	4.4
Retired	58	18.3
Type of occupation		
Self working	28	8.8
Government sector	106	33.4
Private sector	83	26.2
Not related	100	31.5
Family income		
< RM1999	89	28.1
RM 2000-RM2999	116	36.6
RM 3000- RM3999	63	19.9
RM 4000	49	15.5

care. None of other local studies done in the primary care settings specifically examined the quality of

the treating doctors as holistic as our study. Nevertheless, Haliza et al. (2003, 2005) had assessed the technical quality of the doctors involved in their study, in which more than two-thirds of the participants were satisfied with their doctors' technical quality. Other local studies only appraised the

communication skills, interpersonal manners and/or technical quality of the clinic staff in general (Yunus et al. 2004, Sharifa Ezat et al. 2010, Aniza & Suhaila 2011). All of these studies showed high levels of patient satisfaction in the aspects mentioned above, except a study by Sharifa Ezat et al. (2010). In

Table 2: Association between patients' socio-demographic characteristics and the general patient satisfaction

Socio-demographic characteristics	General satisfaction		p-values
	Proportion of satisfied respondents N (%)	Proportion of non-satisfied respondents N (%)	
Gender			
Male	107 (95.5)	5 (4.5)	0.200
Female	188 (91.7)	17 (8.3)	
Age (years)			
<35	66 (90.4)	7 (9.6)	0.108
35 – 64	196 (95.1)	10 (4.9)	
>64	33 (86.8)	5 (13.2)	
Race			
Malay	199 (93.4)	14 (6.6)	0.894
Non-Malay	96 (92.3)	8 (7.7)	
Education level			
Low	28 (84.8)	5 (15.2)	0.146
Middle	140 (94.0)	9 (6.0)	
High	127 (94.1)	8(5.9)	
Job status			
Employed	166 (92.2)	14 (7.8)	0.653
Unemployed	129 (94.2)	8 (5.8)	
Type of occupations			
Government sectors	99 (93.4)	7 (6.6)	0.867
Non-government sectors	196 (92.9)	15 (7.1)	
Family income			
< RM 1999	83 (93.3)	6 (6.7)	0.623
RM2000 – RM2999	106 (91.4)	10 (8.6)	
> RM2999	106 (94.6)	6 (5.4)	

*Low: No education and primary school; Middle: Secondary school; High: Diploma/ STPM/ Degree and above

#Chi square test, $p < 0.05$ as significant at 95% CI

Table 3: Association between each subscale and general patient satisfaction

Subscales	General satisfaction		p-values
	Proportion of satisfied respondents N (%)	Proportion of non-satisfied respondents N (%)	
Doctors			
Satisfied	291 (95.1)	15 (4.9)	<0.001#
Not satisfied	4 (36.4)	7 (63.6)	
Nurses			
Satisfied	254 (97.7)	6 (2.3)	<0.001*
Not satisfied	41 (71.9)	16 (28.1)	
Accessibility			
Satisfied	211 (97.7)	5 (2.3)	<0.001#
Not satisfied	84 (83.2)	17 (16.8)	
Facilities			
Satisfied	111 (98.2)	2 (1.8)	0.014#
ot satisfied	184 (90.2)	20 (9.8)	
Appointment			
Satisfied	262 (96.0)	11 (4.0)	<0.001*
Not satisfied	33 (75.0)	11 (25.0)	

#Chi square test, p<0.05 as significant at 95% CI

*Fisher's Exact test, p<0.05 as significant at 95% CI

this study, about 60% of patients in both private and public primary care clinics were dissatisfied with the staff's professionalism and caring attitude.

A significant number of our respondents, who were satisfied with the doctors, were also generally satisfied. Likewise, those who were not satisfied with the doctors expressed dissatisfaction with the general service. Similar association was not seen with all other subscales suggesting that doctors could be the main contributing factor in determining patient satisfaction. This finding was in parallel with other studies, which demonstrated that physician-related factors were the most important influence of patient satisfaction (Gadallah et al. 2003, Thiedke 2007, Thung & Chan 2009).

In contrast, among the five subscales, two-thirds of our respondents were dissatisfied with the facilities. This is probably due to the overcrowded waiting area with limited space and seats in the UKMMC primary care clinic. However, Haliza et al. (2005) reported high levels of patient satisfaction with the clinics' environment and the basic amenities.

Nonetheless, we found that respondents who were dissatisfied with the facilities, accessibility and appointment were still satisfied generally. This is probably due to low expectation and non-complaining nature of the respondents. They understood the limitations of government clinics (Noor Hazilah & Nooi 2009) and were more accepting

towards the shortcomings in the services. Moreover, patients paid less medical fees as compared to private clinics; hence they were less demanding (Noor Hazilah & Nooi 2009). The majority of our respondents belong to low and lower-middle family income groups, they might not have the luxury of seeking medical care in private settings. Even though the association between socioeconomic status of the respondents and their satisfaction with the service was not statistically significant in our study, Yunus et al. (2004) did show a significant correlation between these two factors.

The findings in our study cannot be generalised to represent the quality of other primary care clinics in this country, as there were a few limitations. First of all, our study was conducted in a university-based primary care clinic, which is run by a group of trained specialists and postgraduates. The service providers are different from those in the public primary care clinics who are mainly medical officers without postgraduate qualifications. In addition, the public primary care clinics usually operate with limited manpower. The doctor-patient ratio is different compared to other clinics as well. Furthermore, not all aspects of the services were evaluated in this study, for example pharmacy, waiting time, continuity of care, drug prescription and laboratory investigations. These factors were found to be significantly influencing patient satisfaction in other studies (Haliza et al. 2003, Morgan et al. 2004, Gadallah et al. 2003, Thiedke 2007, Noor Hazilah & Nooi 2009).

CONCLUSION

Overall, majority of respondents were satisfied with the services. However, many respondents perceived that clinic facilities were substandard. Nonetheless, majority who were not satisfied with accessibility, facilities and appointment were satisfied generally, which is probably due to low expectation and the non-complaining nature of the respondents. Despite this, we still need to improve areas deemed to be substandard. Thus, effective interventions towards improving facilities will further increase patient satisfaction and hence enhance the quality of care provided by the UKMMC primary care clinic. At the same time, continuous improvement should be made on all the evaluated aspects to ensure advancement in the quality of care. This strategy is concurrent with the increasing demands and expectations of patients in the coming decades. Further studies can also be extended to include other primary health care clinics to give broader perspectives regarding quality of primary health care services in Malaysia.

REFERENCES

- Al-Eisa, I., Al-Mutar, M. & Radwan, M. 2005. Patients' Satisfaction with Primary Health Care Services at Capital Health Region, Kuwait. *Middle East Journal of Family Medicine* 3(3):10-16.
- Angelopoulou, P., Kangis, P. & Babis, G. 1998. Private and public medicine: A comparison of quality perceptions. *Int J Health Care Qual Assur Inc Leadersh Health Serv* 11(1):14-20.
- Aniza, I., Rizal, A.M., Ng, Y.S., Mardhiyyah, M., Helmi, I., Syamimi, B.K. & Tahar, A.R. 2011. Caregivers' satisfaction of healthcare delivery at paediatric clinics of Universiti Kebangsaan Medical Centre in 2009. *Med J Malaysia* 66(2):84-88.

- Aniza, I., Suhaila, A. 2011. Clients satisfactions in ISO certified health clinic in Klinik Kesihatan Bandar Baru Bangi, Selangor and its associated factors. *Journal of Community Health* 17(1):18-25.
- Ariff, K.M. & Teng, C.L. 2002. Rural health care in Malaysia. *Australia Journal of Rural Health* 10(2):99-103.
- Coyle, J. & Williams, B. 1999. Seeing the woods for the trees: Defining the forgotten concept of patient dissatisfaction in the light of patient satisfaction research. *Int J Health Care Qual Assur Inc Leadersh Health Serv* 12(6-7):i-ix
- Evans, R.G., Edwards, A., Evans, S., Elwyn, B., & Elwyn, G. 2007. Assessing the practising physician using patient surveys: a systematic review of instruments and feedback methods. *Fam Pract* 24(2):117-127.
- Donabedian, A. 1997. The quality of care: How can it be assessed? *Arch Pathol Lab Med* 121(11):1145-1150.
- Donahue, K.E., Ashkin, E. & Pathman, D.E. 2005. Length of patient-physician relationship and patients' satisfaction and preventive service use in the rural south: a cross-sectional telephone study. *BMC Fam Pract* 6:40.
- Gadallah, M., Zaki, B., Rady, M., Anwer, W. & Sallam, I. 2003. Patient satisfaction with primary health care services in two districts in Lower and Upper Egypt. *East Mediterr Health J* 9(3):422-430.
- Grogan, S., Conner, M., Willits, D., & Norman, P. 1995. Development of a questionnaire to measure patients' satisfaction with general practitioners' services. *Br J Gen Pract* 45:525-529.
- Haliza, A.M., Rizal, A.M. & Raja Jamaluddin, R.A.M. 2003. Kajian kepuasan pelanggan di kalangan pesakit klinik swasta di Seremban [A study on customer satisfaction among patients in private clinics in Seremban]. *Journal of Community Health* 9:44-47.
- Haliza, A.M., Rizal, A.M., Raja Jamaluddin, R.A. & Noorhaida, U. 2005. Kepuasan pelanggan di kalangan pesakit luar klinik kerajaan dan klinik swasta di Seremban, N. Sembilan [Customer satisfaction among patients in a government outpatient clinic and private clinics in Seremban, N. Sembilan]. *Journal of Community Health* 11(1).
- Hutchinson, A. 1993. The role of patient satisfaction assessment in medical audit. *Scand J Prim Health Care Suppl* 1:19-22.
- Ilhaamie, A.G.A. 2010. Service quality in Malaysian public service: Some findings. *International Journal of Trade, Economics and Finance* 1(1):40-45.
- John, J., Yatim, F.M., & Mani, S.A. 2011. Measuring service quality of public dental health care facilities in Kelantan, Malaysia. *Asia Pac J Public Health* 23(5):742-753.
- Kasalova, H. 1995. Rectification of the primary data obtained by a patients' satisfaction survey. *Int J Health Care QualAssur* 8(1):15-16
- Lai, P.S., Chua, S.S., Chan, S.P., Low, W.Y. & Wong, I.C. 2010. Development and validation of the Osteoporosis Patient Satisfaction Questionnaire (OPSQ). *Maturitas* 65(1):55-63.
- Mendoza, A.J., Piechulek, H., al-Sabir, A. 2001. Client satisfaction and quality of health care in rural Bangladesh. *Bull World Health Organ* 79(6):512-517.
- Ministry of Health Malaysia. 2012. *Health Facts 2012*. Malaysia.
- Morgan, E.D., Pasquarella, M., & Holman, J.R. 2004. Continuity of care and patient satisfaction in a family practice clinic. *J Am Board Fam Pract* 17(5):341-346.
- Mpinga, E.K. & Chastonay, P. 2011. Patient satisfaction studies and the monitoring of the right to health: Some thoughts based on a review of the literature. *Global Journal of Health Science* 3(1):64-69.
- Mohd Suki, N., Chwee Lian, J.L. & Suki, N.M. 2009. A comparison of human elements and nonhuman elements in private health care settings: customers' perceptions and expectations. *J Hosp Mark Public Relations* 19(2):113-128.
- Noor, S.N. & Musa, S. 2007. Assessment of patients' level of satisfaction with cleft treatment using the Cleft Evaluation Profile. *Cleft Palate Craniofac J* 44(3):292-303.
- Noor Hazilah, A.M. 2012. Inpatient satisfaction: an analysis of Malaysian public hospitals. *International Journal of Public Sector Management* 25(1):6-16.
- Noor Hazilah, A. & Nooi, P.S. 2009. Patient satisfaction as an indicator of service quality in Malaysian public hospitals. *Asian Journal on Quality* 10(1):77-87.
- Nor Hayati, I., Azimatun, N.A., Rozita, H., Sharifa Ezat, W.A. & Rizal, A.M. 2010. In-patients' satisfaction in the medical and surgical wards -a comparison between accredited and non accredited hospitals in the state of Selangor. *Journal of Community Health* 16(1):60-68.
- Parasuraman, A., Zeithaml, V. & Berry, L. 1985. A conceptual model of service quality and its implications for future research. *J Marketing* 49(1):41-50
- Pitaloka, S., Rizal, A. 2006. Patients' Satisfaction in antenatal clinic Hospital Universiti Kebangsaan Malaysia. *Malaysian Journal of Community Health* 12(1).
- Raja Jamaluddin, R.A.M. 2001. Mengujudkan budaya kualiti di klinik-klinik jagaan kesihatan primer swasta [Establishing a culture of quality in private primary healthcare clinics]. *Journal of Community Health* 7:19-23.
- Saiboon, I., Eng, H.S., Krishnan, B., Ali, S.N., Murad, N., Pathnathan, A. & Choy, C.Y.

2008. A study of patients' satisfaction with the emergency department (ED) of Hospital Universiti Kebangsaan Malaysia (HUKM). *Med & Health* 3(1):7-13.
- Sharifa Ezat, W.P., Jamsiah, M., Malka, S.A., Azimatun Noor, A., Tuti, N., Noor Izzah, A.S. 2010. Customers' satisfaction among urban and rural public health clinics in state of Selangor, Malaysia. *Malaysian Journal of Public Health Medicine* 10(2):52-67.
- Siow, K.K., Ong, S.T., Lian, C.B. & Ngeow, W.C. 2002. Satisfaction of orthognathic surgical patients in a Malaysian population. *J Oral Sci* 44(3-4):165-171.
- Suki, N.M., Lian, J.C.C. & Suki, N.M. 2011. Do patients' perception exceed their expectations in private healthcare settings? *Int J Health Care Qual Assur* 24(1):42-56.
- Thiedke, C.C. 2007. What do we really know about patient satisfaction? *Fam Pract Manag* 14(1):33-36.
- Thung, Y.C. & Chan, G. 2009. Patient satisfaction with and recommendation of a primary care provider: associations of perceived quality and patient education. *Int J Qual Health Care* 21(3):206-203.
- Wan Rashid, W.E & Jusoff, H.K. 2009. Service quality in health care setting. *Int J Health Care Qual Assur* 22(5): 471-482.
- Ware, J.E. & Snyder, M.K. 1975. Dimensions of patient attitudes regarding doctors and medical care services. *Medical Care* 13:669-682.
- Yunus, M.A., Nasir, M.M.T., Nor Afiah, M.Z., Sherina, M.S. & Faizah, M.Z. 2004. Patient satisfaction: A comparison between government and private clinics in Mukim Labu, Sepang, Selangor. *Malaysian Journal of Public Health Medicine* 4(2):6-11.