

## Patient Satisfaction on Waiting Time and Duration of Consultation at Orthopedic Clinic, Universiti Kebangsaan Malaysia Medical Centre

Raja Lexshimi RG<sup>1</sup>, Zaleha MI<sup>2</sup>, Shamsul AS<sup>2</sup>, Suriawati G<sup>3</sup>

*Department of <sup>1</sup>Nursing & <sup>2</sup>Community Health, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur*

*<sup>3</sup>Universiti Darul Iman, Terengganu*

### ABSTRAK

Pesakit semakin berasa tidak puas hati dengan “masa menunggu” dan “tempoh konsultasi” di klinik pesakit luar. Satu kajian keratan rentas telah dijalankan untuk mengukur tempoh menunggu dan tempoh konsultasi pesakit dan mengenalpasti tahap kepuasan pesakit terhadap tempoh menunggu dan tempoh konsultasi di Klinik Ortopedik, Pusat Perubatan Universiti Kebangsaan Malaysia (PPUKM). Kajian ini turut mengkaji kepuasan pesakit terhadap keseluruhan perkhidmatan klinik. Data dikumpul dengan menggunakan borang soal-selidik isi sendiri. Seramai 81 orang pesakit mengambil bahagian di dalam kajian dengan kadar respons 100 peratus. Hasil kajian menunjukkan bahawa terdapat perbezaan yang signifikan di antara min tempoh menunggu tahap II (tempoh menunggu daripada pesakit diberi nombor sehingga pesakit dipanggil masuk ke dalam bilik doktor) yang dijangka (ekspektasi) dengan min tempoh menunggu tahap II sebenar yang dialami. Perbezaan signifikan juga didapati diantara min tempoh konsultasi yang dijangka dengan tempoh konsultasi sebenar. Walau bagaimanapun, perbandingan nilai min tempoh menunggu tahap I (tempoh menunggu daripada pesakit mendaftar sehingga pesakit diberi nombor) yang dijangka dengan tempoh menunggu sebenar tidak menunjukkan perbezaan yang signifikan ( $p > 0.05$ ). Secara keseluruhan, kepuasan pesakit terhadap tempoh menunggu adalah rendah (29.6%) dan tempoh rawatan adalah sederhana (41.9%). Manakala kepuasan keseluruhan perkhidmatan klinik menunjukkan tahap kepuasan yang sederhana (56.8%). Kajian ini juga menunjukkan bahawa kepuasan pesakit tidak dipengaruhi oleh faktor sosiodemografi responden seperti umur, bangsa, tahap pendidikan, pekerjaan dan pendapatan. Keputusan penting dari kajian ini akan dapat membantu pihak pengurusan klinik dalam masalah aduan pesakit dan mempertingkatkan lagi tahap kepuasan pesakit terhadap perkhidmatan keseluruhan klinik Ortopedik di PPUKM.

Kata kunci: tempoh menunggu, tempoh konsultasi, kepuasan pesakit, perkhidmatan klinik, tempoh menunggu yang dijangka

**Address for correspondence and reprint requests:** Raja Lexshimi Raja Gopal, Department of Nursing, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Cheras, Kuala Lumpur. Email: lex@ppukm.ukm.my

## ABSTRACT

Patients are increasingly dissatisfied with the “waiting time” and “duration of consultation” at outpatient clinics. A cross sectional study was carried out to measure waiting time and duration of consultation and to examine patients’ level of satisfaction towards waiting time and duration of consultation at the Orthopedic Clinic, Universiti Kebangsaan Malaysia Medical Centre (UKMMC). This study also examined patient’s satisfaction towards the overall clinic services. Data was collected using a self-administered questionnaire. A total of 81 patients participated in this study with a response rate of 100 percent. Findings indicated a significant difference in the mean between expected waiting time level II (from the time the patient is given the calling number till the time patient is called into the doctor’s room) and the actual waiting time level II experienced. A significant difference in the mean between the expected duration of consultation and the actual duration of consultation experienced was also noted. However, no significant difference was found between the mean of expected waiting time level I (the time patient register at the counter till the patient is given the calling number) and the actual waiting time ( $p>0.05$ ). Overall, patient satisfaction towards waiting time was low (29.6%) and duration of consultation was of moderate level (41.9%). The overall satisfaction towards the clinic services were of average level (56.8%). Findings also indicated that patient satisfaction was not influenced by socio-demographic factors of respondents such as age, ethnic, education level, occupation and income level. Important findings from this study may help staff managing the clinic in addressing patients’ complaint on waiting time and improve patients’ satisfaction on the overall services of the Orthopedic clinic in UKMMC.

*Key words:* waiting time, duration of consultation, patient satisfaction, clinic services, expected waiting time

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## INTRODUCTION

Prolong waiting time in outpatient clinics is one of the most frequently encountered concerns of patients in many of the hospitals worldwide and has been a long standing issue that is yet to be solved by health care providers. It is still a hot topic of discussion even today among health care users, their family members and also the health care providers. Patients are increasingly dissatisfied with the “waiting time” and “duration of consultation” at outpatient clinics. Several studies have ranked waiting time in outpatient clinics as their most major concerns, giving little attention to problems concerning health care, staff communication, behaviour and attitude (Bursch et al.

1993).

The various complaints received from patients are: (1) too much time is spent waiting just to be seen by a doctor, (ii) doctors not punctual and (iii) too short a consultation time. Prolong waiting time at outpatient clinics and a short duration of consultation which has been often deemed as of poor quality has also caused many patients to default treatment or seek outpatient treatment in private hospitals. This has resulted in many patients to voice out their grouses and dissatisfaction through letters of complaint to the Director of hospitals and to the media. Patients were also observed to become impatient and lose their temper, resulting in unpleasant incidences between clinic staff and patients. The

patient's rapport with the physician, waiting time before consultation and consultation length are contributing factors to the long waiting time that have been identified as possible predictors of patient satisfaction. Therefore, prolong waiting time is the main cause of dissatisfaction among outpatients.

Prolong waiting time does not only affect the patients themselves but also their family members. Being a close-linked family and bounded with strong family ties, majority of the children shows the responsibility of taking care of the health of their aged parents and involve actively in their health care decisions. Many make a point to be around or be present when the parents are being seen by their doctors (during consultation time). Therefore, during every hospital visits and follow up appointments, majority of the working children accompany their aged parents to clinic and wait anxiously with their aged parent until they are seen by the doctor. The huge responsibility of sending their aged parents to hospital and then sending them back home safely, requires majority of the children to take time off from work, and many had to rush back to work after a long waiting time in the outpatient clinic. In fact, studies have shown that perception of waiting time by patients, parents and family members are often longer than the reality (Harris et al. 2002; Thompson et al. 1996).

Studies have shown that prolong waiting time in outpatient clinics could lead to dissatisfaction among patients. Prolong waiting time can lead to overcrowded clinics and extended waiting time when doctors do not arrive at the clinic at a specific time. Gourdji et al. (2003) has also identified length of time in the waiting room as a main element of dissatisfaction among outpatients. Activities like relocating the individual to take blood samples, attending health education class in the clinic itself has been suggested to provide a less stressful envi-

ronment and reduce patient's distress while waiting.

Patient satisfaction with health care services has become one of the most frequently used criteria for evaluating programs or treatment outcomes. Patient's perception of clinic waiting experience was found to affect satisfaction. Patients do underestimate or overestimate their actual waiting time. Waiting for less than half an hour from their actual waiting time does not affect their satisfaction but waiting for more than half an hour was found to be unacceptable by patients. Bruce et al. (1998) reported that the patient's perceived waiting time is normally more than the actual time spent waiting. However, patients are satisfied if their waiting time does not exceed more than 40 minutes after arriving on time for an appointment (Huang 1994).

Psychological factors could also influence the patient's perceptions of the clinic waiting experience. For instance, unoccupied time feels longer than occupied time and uncertain waiting or unexplained waiting may be seen longer than explained waiting and known finalized waiting. The consequences of long waiting can directly impact patient satisfaction and health outcomes by generating unnecessary emotional turmoil for the person waiting (Rondeu 1998) and their family members.

The Malaysian Ministry of Health (MOH) recognizes the problem of prolonged waiting times and has suggested ways to improve the waiting time of all outpatient clinics. To solve this problem, the MOH has recommended the staggering appointment time which reduces the waiting time to a certain level and encourages hospitals to phase off the traditional system of giving appointments. The Institute of Medicine in America has also recognized the problem of prolong waiting times and has recommended that at least 90% of scheduled patients should be seen within 30 minutes of their

scheduled appointment time (target time). Outpatient Clinics Managers have also introduced the patient charter standard guidelines to ensure health care providers minimize waiting time of patients to a satisfactory level.

Kurata et al. (1992) in his study has compared patient's and health care providers satisfaction on waiting time and identified 8% of patients and 22% of health care providers were dissatisfied with waiting time. The actual waiting time was estimated to be not more than 45 minutes of their scheduled appointment time. Fernandes et al. (1994) reported that 90% of patients were willing to wait up to one hour from the scheduled appointment time. Another study by Dos Santos et al. (1994), reported that patients had experienced a long waiting time of 188 minutes and 148 minutes (Bangboye & Jarallah 1994).

Services at hospitals are expanding, patients seeking health care are increasing but improvement in the waiting time and duration of consultation are yet to be achieved. Hospitals have also been awarded with certification of ISO 1999 - 2000, however, the quality of services has not changed and still remains the same or poor and in fact, it has deteriorated from bad to worse, which would be due to the increasing number of patients. Nurses and doctors play an important role in ensuring that patients are satisfied with the waiting time, duration of consultation and the overall services rendered are of quality. Therefore, identifying patient satisfaction on waiting time and duration of consultation and overall services of the clinic, will enable an organization to continuously improve the quality of services provided.

No study has been done locally to examine the waiting time at any of the outpatient clinics in UKMMC. The present study aims to measure the waiting time and duration of consultation and examine patient's level of satisfaction towards

waiting time and duration of consultation at the Orthopedic Clinic, UKMMC. This study also examined patient's satisfaction towards the overall clinic services.

## MATERIALS AND METHODS

A cross-sectional descriptive survey was conducted to assess patient satisfaction on waiting time and duration of consultation among patients attending follow up appointments. A total of 81 patients aged between 18 and 80 years were recruited in this study. Patients who came to the clinic without any prior appointment are excluded from the study. Data was collected from June 2004 until April 2005. All patients completed a self-rating structured questionnaire that measured waiting time and duration of consultation. Questionnaires were extracted from the previous studies of Dhanaraj (1997) and Narimah (2004) and were slightly redesigned. Questionnaires consisted of five sections: Section A consisted of questions on waiting time that was recorded by the observer (researcher), Section B consisted of questions on the factors that influence waiting time such as arrival time of the clinic doctor and clinic's filing system (also recorded by the researcher), Section C consisted of questions that identify patient's expectation of waiting time, Section D evaluated the duration of consultation experienced by the patients, and Section E examined patient satisfaction on both waiting time and duration of consultation. Questionnaires in section E were divided into two sections: Section 1 examined the level of satisfaction of waiting time and duration of consultation whereby Section 2 examined the level of satisfaction towards clinic services. Section C, D and E were completed by the patients themselves. Waiting time referred to the time patient is given the calling number till the time patient is called into the doctor's room. Duration of consultation referred to

the time the patient enters and leaves the doctor's room.

Waiting time experienced by patients were categorized into two levels: waiting time Level I was the waiting time experienced by patients from the time of reporting at the registration counter till a waiting number is given. Waiting time Level II was the waiting time experienced by patients from the time the patient received the waiting number till the patient was called into the doctor's room. Direct observation of waiting time and duration of consultation was also monitored and recorded by the researcher using a timer. These data was compared to the expected time of patients and the actual time reflected on the log charter maintained in the Orthopedic clinic.

A "prolonged waiting time" was defined as when the patient's actual waiting time which exceeded the total waiting time as reflected in the clinic log which was 67 minutes. The waiting time showed in the clinic log for level I was 5 minutes and level II was 62 minutes. The actual duration of consultation time reflected in the clinic log was 15 to 60 minutes. Duration of consultation time in this study was categorized into short consultation time (less than 15 minutes), normal consultation time (15 to 60 minutes) and a prolonged consultation time (more than 60 minutes).

The Statistical Package for Social Sciences (SPSS) version 12.0 was used to produce descriptive statistics. Data on satisfaction of waiting time was analyzed using a 4-point Likert scale ranging from (1) strongly do not agree to (4) strongly agree. A score of 3 and 4 was deemed as satisfactory and a score of 1 and 2 was deemed as unsatisfactory. Questionnaires designed consisted of positive- and negative-based as to avoid any bias. For positive type of questionnaires, a score of (4) was deemed as strongly agree, (3) as agree, (2) as disagree, and (1) as strongly disagree. As for negative

type of questionnaires, a reversed scoring method was used: A score of (4) strongly disagree, (3) disagree, (2) agree and (1) as strongly agree. A score of 29 was considered as an average score as total scores were 40. Therefore, total scores of 29 and above were deemed as satisfactory and scores below 29 were deemed as unsatisfactory. A chi square test was used to examine the relationship between satisfactory scores of waiting time, duration of consultation and socio-demographic factors of respondents.

## RESULTS

Table 1 highlights the distribution of waiting time experienced by patients in level I. The average waiting time in level I was  $16.51 \pm 15.99$  minutes as compared to the time (5 minutes) reflected in the clinic log. The average expectation of waiting time for level I was  $20.46 \pm 16.18$  minutes. Majority (34.6%) expected a waiting time from 10-19 minutes in level I. Only seven (8.6%) patients expected a waiting time of 50 minutes and above. Majority (45.7%) of the patients waited less than 10 minutes, which was lower than their expected time but was in line with the targeted time reflected in the clinic log. The waiting time range for level I was 1 – 97 minutes, which is higher than the expected waiting time of 1 – 75 minutes. In comparison with the actual waiting time in which majority (45.7%) waited less than 10 minutes, 23.5% of patients expected such a waiting time. Analysis also indicated that only one patient experienced the actual waiting time of 1 minute.

Table 2 highlights the distribution of waiting time experienced by patients in level II. The average waiting time in level II was  $127.15 \pm 48.65$  minutes as compared to the time (62 minutes) reflected in the clinic log. The average expected time was  $44.63 \pm 30.33$  minutes. Twenty-eight (34.5%) of the patients experienced

a waiting time of 150 minutes and above. The waiting time range for level II was 44 – 267 minutes. In comparison with the actual waiting time, majority (34.6%) of patients expected a waiting time of 30 – 59 minutes, but in actual waiting time, only 5 patients (6.2%) experienced such a waiting time. Only one patient (1.2%) expected a waiting time of 150 minutes and above but in actual waiting time, majority of the patients, 28 (34.5%) experienced such a long waiting time. It goes to indicate that the actual waiting time was significantly higher than the expected time.

Table 3 highlights the distribution of consultation time experienced by patients. The average duration of consultation experienced by respondents were  $12.79 \pm 6.85$  minutes as compared to the time range (15 to 60 minutes) reflected in the clinic log. The length of time spent on majority (65.4%) of patients was less than 15 minutes. Only 3 (3.7%) patients experienced a lengthy consultation time between 30 – 44 minutes compared to the 25 (30.9%) that expected such a time. Majority (40.7%) expected a long duration of consultation of 60 minutes and above, and the duration of consultation of less than 15 minutes is considered as short consultation. Findings indicate a significant difference in the duration of consultation between the expected and the actual duration of consultation ( $p < 0.05$ ).

The average total waiting time experienced by respondents before doctor's consultation was  $143.65 \pm 53.54$  minutes as compared to the time (67 minutes) reflected in the clinic log (Table 4). A number of 29 patients had a waiting time of 100 – 149 minutes and the other 29 (35.8%) patients had a waiting time of 150 – 199 minutes. The minimum and maximum waiting time was 46 minutes and 300 minutes, respectively. Findings indicate a significant difference between the actual and the expected total waiting

time of the patients ( $p < 0.001$ ) and more than twice the standard time reflected in the clinic log.

Table 1: Waiting time experienced by respondents in Level I (n= 81).

Waiting time (minutes)	Expectation of waiting time n (%)	Actual waiting time n (%)	Waiting time reflected in Clinic Log
<10	19 (23.5)	37 (45.7)	5 minutes
10 – 19	28 (34.6)	11 (13.6)	
20 – 29	8 (9.9)	18 (22.2)	
30 – 39	18 (22.2)	12 (14.8)	
40 – 49	1 (1.2)	1 (1.2)	
≥ 50	7 (8.6)	2 (2.5)	
Average	20.46±16.18	16.51±15.99	
Range	1 – 75	1 – 97	

Table 2: Waiting time experienced by respondents in Level II (n= 81)

Waiting time (minutes)	Expectation of waiting time n (%)	Actual waiting time n (%)	Waiting time reflected in Clinic Log
<30	20 (24.7)	0 (0)	62 minutes
30 – 59	28 (34.6)	5 (6.2)	
60 – 89	26 (32.1)	15 (18.5)	
90 – 119	2 (2.5)	17 (21.0)	
120 – 149	4 (4.9)	16 (19.8)	
≥ 150	1 (1.2)	28 (34.5)	
Average	44.63±30.33	127.15±48.65 <sup>a</sup>	
Range	5 – 180	44 – 267	

<sup>a</sup> significant difference between expected and actual waiting time ( $p < 0.001$ )

Overall satisfaction towards total waiting time and duration of consultation was relatively low, 29.6% (n=24) and 42.0% (n=34), respectively (Table 5). Average total waiting time was significantly longer in the dissatisfied group (p=0.014) and the duration of consultation was significantly shorter in the dissatisfied group as compared to the satisfied group. Further analysis indicated that there was no significant association between socio-demographic factors and patient's overall satisfaction (Table 6).

## DISCUSSION

Patient satisfaction has been used as a significant indicator to measure the quality of health care (Rondeau 1998). It has

become increasingly important in today's healthcare. Therefore, this study was undertaken to identify the waiting time and duration of consultation and patient satisfaction of waiting time and overall clinic services at the Orthopedic Clinic, UKMMC.

### Long Waiting Time

The issue of waiting too long to be seen by a doctor has been a long-standing issue not only in all outpatient clinics in Malaysia but also in other countries. Several studies by Jackovitz (1999), Luther (1996), Mc Kinnon et al. (1998), Thomas & Frank (1997) and Rondeu (1998) have indicated that long waiting time in outpatient clinics had caused pa-

Table 3 : Duration of consultation experienced by respondents (n= 81)

Duration of consultation (minutes)	Expectation of duration of consultation n (%)	Actual duration of consultation n (%)	Duration of consultation reflected in Clinic Log
< 15	4 (4.9)	53 (65.4)	
15 – 29	16 (19.8)	25 (30.9)	
30 – 44	25 (30.9)	3 (3.7)	
45 – 59	3 (3.7)	0 (0)	15 – 60 minutes
≥ 60	33 (40.7)	0 (0)	
Average	44.63 ± 30.33	12.79 ± 6.85 <sup>a</sup>	
Range	5 – 180	3 – 35	

<sup>a</sup>significant difference between expected and actual waiting time (p < 0.001)

Table 4 : Total waiting time (level I and II) experienced by respondents (n=81).

	Total waiting time (minutes)	Expectation of total waiting time n (%)	Actual total waiting time n (%)	Total waiting time reflected in Clinic Log
Level I and Level II	< 50	36 (44.4)	3 (3.7)	
	50 – 99	35 (43.2)	14 (17.3)	
	100 – 149	4 (5.0)	29 (35.8)	
	150 – 199	5 (6.2)	29 (35.8)	
	200 – 249	1 (1.2)	2 (2.5)	67 minutes
	≥ 250	0 (0)	4 (4.9)	
	Average	65.09 ± 40.36	143.65 ± 53.54 <sup>a</sup>	
Range	6 – 210	46 – 300		

<sup>a</sup>significant difference between expected and actual waiting time (p < 0.001)

Table 5 : Respondents' satisfactions on total waiting time and duration of consultation (n=81).

	Satisfied n (%)	Not satisfied n (%)
Total waiting time	24 (29.6)	57 (70.4)
Total waiting time (mean $\pm$ sd)	121.33 $\pm$ 51.09	153.05 $\pm$ 52.14 <sup>a</sup>
Duration of consultation	34 (42.0)	47 (58.0)
Duration of consultation (mean $\pm$ sd)	14.85 $\pm$ 7.14	11.30 $\pm$ 6.30 <sup>b</sup>

<sup>a</sup>significant difference in total waiting time between satisfied and not satisfied respondents (p=0.014).

<sup>b</sup>significant difference in duration of consultation between satisfied and not satisfied respondents (p=0.020).

Table 6 : Respondents' satisfactions on waiting time and duration of consultation and their associations with respondents' demographic characteristics (n=81).

Demographic characteristics	Satisfied n (%)	Not satisfied n (%)	Chi-square ( $\chi^2$ )	p-value
<b>Ethnicity</b>				
Malay	18 (28.1)	46 (71.9)	0.331	0.565
Non-Malay	6 (35.3)	11 (64.7)		
<b>Age</b>				
< 46 years old	9 (23.1)	30 (76.9)	1.549	0.213
$\geq$ 46 years old	15 (35.7)	27 (64.3)		
<b>Education</b>				
High	18 (27.3)	48 (72.7)	0.437	0.508
Low	6 (40.0)	9 (60.0)		
<b>Occupation</b>				
Working	13 (28.9)	32 (71.1)	0.027	0.870
Not working	11 (30.6)	25 (69.4)		
<b>Income</b>				
< RM 1,500	11 (28.9)	27 (71.1)	0.173	0.678
$\geq$ RM 1,500	13 (33.3)	26 (66.7)		

tient dissatisfaction of hospital services and indirectly affected the quality of health care. Findings of the above studies are similar to the findings of this study as majority of patients in outpatient clinics experienced a long waiting time. Although the time duration to be given the waiting number was acceptable and fulfilled the expectation of the patients, the time duration from the time the patient received the waiting number until the patient was called into the doctor's room was way too far from the patients'

expectation. The waiting time had also exceeded the standard waiting time that should be achieved by any government hospitals in which waiting time for patients should not be more than two hours or 120 minutes (Khalis 2005). This could probably be due to the clinic session that started later than the given appointment and the current appointment system (clustered appointment system) that was not really effective. However, hospitals in other countries have managed to rectify the problems of long waiting time by im-



plementing the staggering time in order to provide quality health care.

Based on observations, majority of doctors came to start their clinic at 9:30 am. The earliest doctor present was recorded at 8:45 am and the latest was by 11:00 am. Doctors' delay in attending their clinics was due to the tasks that they have to complete in the Orthopedic wards. All patients in the clinic were given clustered appointments, from 8:00 am to 11:00 am. This caused the patients to wait longer as registration at the counter only starts at 8:00 am.

### *Short Consultation Time*

The findings of this study also showed that the duration of consultation did not fulfill the expectation of patients. The duration of consultation stated in the clinic charter, which was supposed to be between 15 to 60 minutes was not achieved. The short duration could probably be due to follow-up appointments, which do not require thorough and long evaluation of the patients as compared to the new cases. It was observed that there was a lack of communication or discussion regarding the patient's disease between the doctor and the patient. This could be due to the doctor who wanted to expedite the consultation process due to the large number of patients or to ensure that the clinic operation ended before lunch time.

### *Patients Satisfaction*

The findings showed that the level of patients satisfaction on waiting time and consultation time were low. A total of 70.4% and 58.0% of the respondents were dissatisfied with the waiting time and the consultation time, respectively. This is in accordance with an earlier study done by Mowen et al. (1993) in which he reported that patients who waited longer than the expected time had

a lower satisfaction level as compared to the patients in which their expected waiting time was fulfilled.

Many previous studies such as by Putnam et al. (1985), Linn and Sheldon (1982) and Hall and Dornan (1990) showed a positive relationship between satisfaction level and age. Hall and Dornan (1990) found that aged patients are less demanding and more satisfied with the services received. Meanwhile, Bar-Dayana et al. (2002) stated that young patients had lower satisfaction level as compared to the older ones. A similar trend could also be seen in this study. This could be due to frequent visits to the clinic and long involvement of patients, especially those with chronic diseases that they began to develop good rapport with the health services provider until the patients assumed that the services are channeled according to their needs. According to Aljunid (1995), patients who came frequently to the clinic would have a change of perception or adaptation and indirectly would follow the requirements of hospital services.

Fox and Stoms (1981) who conducted a study in several hospitals in Baltimore, United States, reported that lower income group showed higher satisfaction level with the services provided as compared to the higher income group. Alpert et al. (1970) found that people with lower income levels were more satisfied with the services provided. However, there was no significant association between customers' satisfaction and their income (Pascoe & Atkinson 1983; Larsen et al. 1997; Korsh et al. 1968). Dhanaraj (1997) found out that women, lower-educated people, elderly, pensioners and lower-income people were more satisfied with the services as compared to their counterparts. Some pattern of associations could be seen in this study where younger age, higher education level, working and higher income group were associated with low satisfaction level.

However, all of these associations were not significant.

### *Overall Satisfaction on Clinic Services*

In general, respondents showed a moderate satisfaction level on the services provided by the Orthopedic Clinic, UKMMC. The mean score of satisfaction was comparable to the standard score of 29, and a total of 56.8% of the respondents satisfied with the clinic services.

A study conducted in a Mother and Child Health Clinic in Muar, Johor (Mukhtar et al. 1995) showed a satisfaction level of 70% whereas another study done by Narimah Yusof (2004) on antenatal services in the Larut Matang District Health Clinic showed the satisfaction level to be 87.1%. Dhanaraj (1997) also conducted a study at the outpatient unit, Sabak Bernam Hospital, reported the satisfaction level to be 36.9%. However, there were no studies done in relation to waiting time at Orthopedic Clinics. A comparison cannot be made here as they are just ordinary clinics and does not fall under the category of a teaching hospital.

The overall satisfaction score by ethnicity were comparable to the standard score (29) where the Malays showed a score of 28.72 and the non-Malays showed a score of 29.82. No significant difference was noted between the two. According to Weiss (1988), the association between ethnicity and patients' satisfaction on clinic services are inconsistent, and Krol & Nord Lund (1983) also reported that many studies did not show any association between ethnicity and patient's satisfaction.

To improve patient satisfaction in outpatient clinics, health care workers should be sensitive to patient's grouses on prolong waiting time. Steps should be taken to reduce the waiting time. Nurses who manage the clinic have to ensure that patient's need not wait longer to see the doctor. Doctor's are to ensure that

patient's are not unnecessarily made to wait during the consultation period.

Prolong waiting time in outpatient clinics is not only an issue in Malaysian hospitals but worldwide. Other countries also face the same problem of prolong waiting time. Studies have been undertaken in outpatient clinics by many researchers and results have helped many hospitals to improve the overall outpatient clinic services tremendously by adopting the staggering appointment time. Not many outpatient clinics in the local hospitals have adopted the staggering system of appointment recommended by the Ministry of Health of Malaysia for some unknown reasons

### **CONCLUSION**

Patients are dissatisfied with the waiting time in the Orthopedic Clinic as it is not in accordance with the waiting time reflected in the clinic log. This study provided important information which can be helpful for nurse managers, doctors and clinic staff of Orthopedics Clinics to further reduce waiting time and duration of consultation and at the same time improve the satisfaction level of patients in the Orthopedic Clinic. Waiting time and duration of consultation are important components of patient satisfaction.

It is strongly recommended here that the staggering system of appointment recommended by the Ministry of Health, Malaysia, be adopted to reduce patient waiting time. Some outpatient clinics in UKMMC and other private hospitals have adopted the staggering system of appointment and have successfully reduced the waiting time.

Conducting morning ward rounds before attending the Outpatient Clinic has been identified as one of the main contributing factors in prolong waiting time. It is recommended that to reduce patient waiting time, only a few doctors should be assigned to do the morning ward

round. Doctors who are not involved in the morning ward round are required to start seeing patients at the clinic at 8am. On the other hand, doctors who come down to the clinic after their morning ward round should be allowed to see patients whose appointment starts from 9.30am onwards. This recommended practice will not only reduce patients' waiting time, but also allow doctors to finish their clinic before lunch time and allow a good rest during lunch time. Doctors, Nurse Manager in charge of the clinic and clinic nurses should communicate effectively with each other and work hand in hand to reduce prolong waiting time of patients at the Orthopedic Clinic.

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