

## LAPURAN AKHIR

### DOCTOR-SHOPPING BEHAVIOUR AMONGST ADULT PATIENTS ATTENDING FAMILY MEDICINE CLINIC, HOSPITAL UNIVERSITI SAINS MALAYSIA, KUBANG KERIAN, KELANTAN

GERAN JANGKAPENDEK USM



UNIVERSITI SAINS MALAYSIA

Nama Penyelidik: Dr. Shaiful Bahari Ismail (Jabatan Perubatan  
Keluarga, PPSP, USM)

Nama Penyelidik-Penyelidik:  
Dr. Nor Asmah Hassan  
Dr. Syed Hatim Noor



USM J/P- 06

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**BAHAGIAN PENYELIDIKAN & PEMBANGUNAN  
CANSELORI  
UNIVERSITI SAINS MALAYSIA**

Laporan Akhir Projek Penyelidikan Jangka Pendek

1) Nama Penyelidik: Dr. Shaiful Bahari Ismail

Nama Penyelidik-Penyelidik

Lain (Jika berkaitan) : Dr. Nor Asmah Hassan  
Dr. Syed hatim Noor

2) Pusat Pengajian/Pusat/Unit : Sains Perubatan/Jabatan Perubatan  
Keluarga

3) Tajuk Projek: Doctor-Shopping Behaviour Amongst Adult Patients  
Attending Family Medicine Clinic, Hospital Universiti Sains Malaysia, Kubang  
Kerian, Kelantan

- 4) (a) Penemuan Projek/Abstrak  
(Perlu disediakan maklumat di antara 100 – 200 perkataan di dalam Bahasa Malaysia dan Bahasa Inggeris. Ini kemudiannya akan dimuatkan ke dalam Laporan Tahunan Bahagian Penyelidikan & Pembangunan sebagai satu cara untuk menyampaikan dapatan projek tuan/puan kepada pihak Universiti).

### Abstract

**Title:** Doctor-shopping behaviour amongst adult patients attending Family Medicine Clinic, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan.

**Introduction:** Doctor-shopping refers to the changing of doctor without professional referral in a single episode of illness. It leads to some health risk and social problems.

**Objectives:** To determine the prevalence and associated factors of doctor-shopping behaviour amongst adult patients attending Family Medicine Clinic (FMC) Hospital Universiti Sains Malaysia (HUSM).

**Methodology:** It was a cross-sectional study conducted on 442 adult patients aged 18 years and above. It was conducted as face to face interview using questionnaires. Data were analysed using SPSS version 11.

**Results:** Fifty-six percents of these patients met our criteria for doctor-shopping patients. Most of the patients went to general practitioners for consultation prior to FMC visit. One-fifth of the respondents went for alternative treatment for the current illness episode. The main reason for changing doctors was due to no improvement of the illness. Doctor-shopping behaviour was found to be significantly associated with older age group and employed patients. Doctor-shopping patients were found to be high among married people, females and patients with low education level, but the associations were not significant. The significant associated factors of doctor-shopping behaviour were chronic duration of illness, and advice to seek treatment from somebody.

**Conclusion:** Prevalence of doctor-shopping behaviour amongst adult patients attending FMC was high. It is important to recognise and anticipate problems related to doctor-shopping behaviour. We need to emphasise on the importance of a good doctor-patient relationship, and give accurate explanation and health education to maintain a proper continuity of care.

- (b) Senaraikan Kata Kunci yang digunakan di dalam abstrak:

Bahasa Malaysia

Bahasa Inggeris

Doctor shopping, doctor hopping

5) Output Dan Faedah Projek

- (a) Penerbitan (termasuk laporan/kertas seminar)  
(Sila nyatakan jenis, tajuk, pengarang, tahun terbitan dan di mana telah diterbitkan/dibentangkan).

**International  
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Clinic, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan  
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**Presentation**

8<sup>th</sup> Family Medicine Scientific Meeting, August 2004, Kuantan, Pahang

(b) Faedah-Faedah Lain Seperti Perkembangan Produk, Prospek Komersialisasi Dan Pendaftaran Paten.  
(Jika ada dan jika perlu, sila guna kertas berasingan)

(c) Latihan Gunatenaga Manusia

i) Pelajar Siswazah: Dr. Nor Asmah Hassan

ii) Pelajar Prasiswazah:

ii) Lain-Lain :

6. Peralatan Yang Telah Dibeli:


sila lihat lampiran belanjawan

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UNTUK KEGUNAAN JAWATANKUASA PENYELIDIKAN UNIVERSITI

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**PROFESSOR ABDUL AZIZ BABA**  
Chairman of Research & Ethics Committee  
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**DOCTOR-SHOPPING BEHAVIOUR AMONGST ADULT PATIENTS  
ATTENDING FAMILY MEDICINE CLINIC, HOSPITAL UNIVERSITI SAINS  
MALAYSIA, KUBANG KERIAN, KELANTAN.**

**Keywords:** doctor-shopping, associated factors

**ABSTRACT**

**Objective** To determine the prevalence and associated factors of doctor-shopping behaviour amongst adult patients attending Family Medicine Clinic (FMC) Hospital Universiti Sains Malaysia (HUSM).

**Methods** It was a cross-sectional study conducted on 442 adult patients aged 18 years and above. It was conducted as face to face interview using questionnaires. Data were analysed using SPSS version 11.

**Results** Fifty-six percents of these patients met our criteria for doctor-shopping patients. Most of the patients went to general practitioners for consultation prior to FMC visit. One-fifth of the respondents went for alternative treatment for the current illness episode. The main reason for changing doctors was due to no improvement of the illness. Doctor-shopping behaviour was found to be significantly associated with older age group and employed patients. Doctor-shopping patients were found to be high among married people, females and patients with low education level, but the associations were not significant. The significant associated factors of doctor-shopping behaviour were chronic duration of illness, and advice to seek treatment from somebody.



**Conclusion:** Prevalence of doctor-shopping behaviour amongst adult patients attending FMC was high. It is important to recognise and anticipate problems related to doctor-shopping behaviour. We need to emphasise on the importance of a good doctor-patient relationship, and give accurate explanation and health education to maintain a proper continuity of care.

## **INTRODUCTION**

The term doctor-shopping refers to the changing of doctor without professional referral in a single episode of illness. Doctor-shopping behaviour has already been reported in many countries including Hong Kong, Japan and also Malaysia ( Lo A.Y. *et al.*, 1994, Sato T. *et al*, 1995, and Sanidah M.A., 1998, unpublished).

Rusli N. *et al.* (1995) described that majority of outpatient had adopted the second mode of treatment after an apparent failure of the first mode of therapy, went to government or private doctors with small proportion seeking traditional healers.

There are several factors contributing to these problems, for example the patient may not have enough medical knowledge about the nature of the disease, poor compliance to the medication, poor doctor-patient relationship (Kasteler J. *et al.*, 1976), high cost of services and inconvenience of the location and time (Safran D.G. *et al.*, 2001). The factors are not only confined to the patients or doctors, it may also contributed by the types of illness and other diseases factors (Sato T. *et al*, 1995).

This doctor-shopping phenomenon is also related to the implication of any healthcare system. In Malaysia, patients are free to choose different doctors for their illness because most people are not allocated to any family or primary care doctor (Aljunid S.M., 1996). Other weaknesses in the healthcare services provided e.g. quality of the treatment given should also be identified in view to reduce the doctor-shopping behaviour.

Understanding the doctor-shopping behaviour is particularly important in a setting where a wide range of resources and facilities are available such as in Malaysia. Primary care doctors need to be aware with problems and factors involved in this doctor-shopping behaviour, to be able to avoid and anticipate patients from disappointment or harmful approaches.

## **METHODS**

This was a cross-sectional study, which was conducted from August to December 2003 at the Family Medicine Clinic (FMC), Hospital Universiti Sains Malaysia (HUSM), Kubang Kerian, Kota Bharu, Kelantan.

This study involved all new or inactive patients aged 18 years old and above who attended this clinic during the study period. The inactive patients were considered if they did not have a visit to the FMC for the past one year. Those who agreed to participate in the study and able to communicate in Malay or English language were included. The exclusion criterias were patients who refused to give verbal informed consent, those who were on follow-up and the pediatric patients.

## **Instrument**

The questionnaire used in this study was designed based on previous studies and literature research. The questionnaire was structured to consist the sociodemographic data of the respondent and questions on doctor-shopping behaviour.

The sociodemographic data of the respondent were age, gender, ethnic, marital and occupational status, education level and household income. The doctor-shopping behaviour questionnaire which consist of 15 questions related to types and number of visits to medical facilities, the use of alternative medicine, and patients' health status such as duration of illness, condition of illness, reason for changing doctor, and so forth.

## **Definition of doctor-shopping patient**

Doctor-shopping patient was defined as a patient who visited at least one medical facility before coming to FMC for the same illness episode, and they had not been referred by the first visited or consulted doctor. The non doctor-shopping patient was defined as a patient who did not visit any medical facility before, or when the patient was referred to FMC by the first consulted doctor.

## **Statistical analysis**

Data collected was analysed by using SPSS version 11. Independent student t-test was used to calculate the mean and standard deviation for age with the level of significance set at  $p < 0.05$ . Chi-square test was used to assess the association between doctor-shopping patients and categorical variables. Multiple logistic regression analysis was used when

multiple variables were considered simultaneously. The outcome (dependent) variable was doctor-shopping patient or non doctor-shopping patient.

## **RESULTS**

### **1) Sociodemographic data**

Table 1 showed the sociodemographic characteristics of 413 respondents who completed the study. Majority of the respondents were Malays and belong to the low educational status group. The gender, occupational status and household income distribution of the respondent population was almost equal.

(Table 1 here)

### **2) Doctor-shopping patients**

#### **i) Prevalence**

Figure 1 showed 232 (56.2%) respondents were considered as the doctor-shopping patients. One hundred and eighty-one (43.8%) respondents had just come to FMC for their first visit, or they came to FMC after being referred by their first consulted doctor. This group of respondents was considered as the non doctor-shopping patients group.

(Figure 1 here)

#### **ii) Number of medical facilities visited**

Table 2 showed the number of medical facilities visited among the respondents. Out of 181 non doctor-shopping patients, 171 of them have never visited any facilities before coming to FMC or a first timer. The other 10 from the non doctor-shopping group had

one visit to another medical facility before being referred to the FMC by the first visited doctor. Most of the non-first timer visited only one or two medical facilities before. Only two of them had visited 6 different medical facilities before coming to FMC.

(Table 2 here)

### **iii) Types of previous consultation**

Figure 2 showed the most frequent type of previous consultation by the doctor-shopping patients was general practitioner (49.0%), followed by health clinic (24.2%), outpatient department of another government hospital (21.7%) and government specialist clinic (3.3%). Less than 1% visited either private specialist clinic or private specialist hospital.

(Figure 2 here)

### **iv) Reasons for changing doctor**

Table 3 showed most of the doctor-shopping respondent (63.1%) changed doctors because of no improvement of the illness, followed by recommendation by others (33.2%). Only a small number of respondents changed doctors because of dissatisfaction with the previous doctor's negative attitude.

(Table 3 here)

## **3) The associated factors of doctor-shopping behaviour**

### **i) The sociodemographic factors**

The mean of age of doctor-shopping respondents was 39.92 (SD  $\pm$  16.82) while the mean age of the non doctor-shopping respondents was 34.85 (SD  $\pm$  15.70). There was a highly significant difference between these two groups. Table 4 showed that doctor-shopping

patients were higher among employed group as compared to unemployed respondents (43.5%). The association between occupational status and doctor-shopping behaviour was highly significant statistically.

As shown in Table 4, the association between gender, ethnicity, marital status, education level and household incomes with doctor-shopping behaviour was not statistically significant.

(Table 4)

## **ii) Characteristics of behaviour**

Table 5 demonstrated more respondents in the doctor-shopping group tend to have a chronic illness for more than a year while about half in the non doctor-shopping group had less than one week duration of illness. Table 5 also showed a greater proportion of respondents in the doctor-shopping group (72.8%) claimed that they were recommended or received advised from somebody to come to FMC to get treatment as compared to the non doctor-shopping group (60.2%). There was a highly significant difference in both of the studied factors.

As shown in Table 5, the other characteristic factors; condition of illness, high expectation of effective management, patient expectation and of serious disease were found not to have a statistically significant difference.

#### **4) Multivariate analysis**

To develop a more refined model of the factors affecting doctor-shopping, the significant predictors from the variables were selected and analysed using the simple logistic regression analysis. Then, the multivariate regression analysis was used to determine the association between the significant variables after controlling the confounding factors. Based on the multivariate analysis, the older age group, employed patients, long duration of illness and patients' received advice or recommendation from somebody else, were the significant variables associated to the doctor-shopping behaviour (Table 6).

## **DISCUSSION**

In Malaysia, there were only few studies looking at this doctor-shopping behaviour. From this study, 232 (56.2%) respondents were found to be doctor-shopping patients. A higher prevalence rate was reported by Sanidah MA (1998), where one hundred and twenty-six (60.9%) out of 200 respondents were doctor-shopping patients in the Primary Care Clinic, UHKL. Although both HUSM and UHKL are two major university hospitals and have a similar facility setting as tertiary hospitals, the population setting is slightly different. Probably, doctor-shopping behaviour is seen higher in Kuala Lumpur, which is more urbanised due to the easy availability of modern transport system and medical facilities. In contrast, an earlier survey done in Johore demonstrated only 6.4% respondents were doctor shoppers (Ngeow T.F. *et al.*, 1981). The possible explanation for this discrepancy was because of it was done at general practitioner clinics which normally were the first place visited by patients as compared to the university hospitals.



From this study, it also showed that the prevalence of doctor-shopping is higher than the prevalence in Hong Kong, which was nearly 40% ( Lo A.Y. *et al.*, 1994) and 23% in Japan (Sato T. *et al.*, 1995). Even though study by Sato T. *et al.* was conducted at medical school hospital similar to our study setting, perhaps the prevalence was lower because of the use of different definition of doctor-shopping patient.

The most frequent type of previous consultation in this study was private general practitioner (49%). This is consistent with finding by Sanidah M.A. (1998). This finding is slightly different from finding reported by Rusli N. *et al.* (1995) that most respondents who obtained a second mode of treatment had been treated by government doctors (41.5%), private doctors (36.9%) and medical assistants (6.2%).

There are various reasons for a patient to shop for doctors. In this study, the respondents mainly shopped for doctors because of no improvement in their illness. The second most common reason was recommendation by somebody to seek another doctor. Less than one-fifth of patients gave reason of inconvenience of time and location. A small proportion of patients shopped because of their dissatisfaction with doctor's attitude or had side-effects of treatment. In this study, many of the respondents had given more than one reason for doctor-shopping. Probably, it is better to ask the respondents to rank their reasons of shopping to get a better picture.

Lo A.Y. *et al.* (1994) found that two-third of patients changed doctors because of persistence of symptoms. It was also found as the main reason in other studies (Ngeow T.F. *et al.*, 1981 and Sanidah M.A., 1998).

As shown by Safran D.G. *et al.* (2001), most of doctor-shopping patients voluntarily changed physicians related to the physician-patient relationship while less than a quarter of those who changed physicians, changed involuntarily because the physician had moved, retired, died or the patient had moved to a substantial distance.

An essential element of doctor-patient relationship is communication. Good communication will elicit cooperation, minimize misunderstanding and enable diagnosis to be amended or retracted without shaking the patient's confidence in his doctor. Although doctors had been directly incriminated in only a small proportion of the shoppers in this study, we need to be involved in a more extensive way to improve the interpersonal relationship between doctors and patients. It is good if independent or non-medical person should be involved in the interview to get a better picture.

This study found that there are significant associations between doctor-shopping behaviour with age, occupational status, duration of illness, and advice from somebody.

Doctor-shopping behaviour was found higher among older age group. This finding is seen similar to the study done by Sanidah M.A. (1998) but contradicted with many other studies. Studies by Olsen D.M. *et al.* (1976), Lo A.Y. *et al.* (1994) and Safran D.G. *et al.*

(2001) described that doctor shoppers were likely to be of younger patients. However, studies by Ngeow T.F. *et al.* (1981) and Sato T. *et al.* (1995) revealed no association between age and doctor-shopping behaviour.

There are few possible reasons why older age group was noted to be associated with doctor-shopping. Chronic diseases and disability are likely to be more frequent in the elderly population. The diseases are not easy to be treated and it usually leads to shopping of doctors. The elderly are more independent in making decision to shop for treatment. While in the younger age group, especially below the age of 20 years, they are still dependent on their parents or family in making decision for treatment. The young adults are probably more educated and have more awareness on health risks and implication of changing frequent doctors.

Employed patients were found to be significantly associated with doctor-shopping behaviour. This finding is different from studies by Sanidah M.A. (1998) and Sato T. *et al.* (1995), which found that there was no significant association between occupational status with doctor-shopping behaviour. Perhaps this significant association is due to the employed population usually has limited time because of their job and they would normally show preference for private clinics due to shorter waiting period. In addition, they have the ability to finance private treatments, which are normally expensive compared to government treatments. This group of patients tends to get first few treatments from general practitioners before switching to a government hospital or tertiary centre like HUSM for further management.

This study showed a higher rate of doctor shoppers among Malays compared to non-Malays. However, low representation of non-Malays in this study is limited for possible proper analysis of the finding. Previously, in the study by Sanidah M.A. (1998), the association between ethnic group and doctor-shopping was not significant.

This study revealed more doctor-shopping patients were married patients but the association was not significant. It was similar to the finding by Sato T. *et al.* (1995). In the other hand, only Sanidah M.A. (1998) found that doctor-shopping behaviour had significant association with marital status. She noted that the rate was higher among single patients.

There was no significant association of doctor-shopping behaviour with education level in this study. This finding is not consistent with findings from two previous studies. Sato T. *et al.* (1995) revealed that patients with education less than 9 years (classified as low education) tend to exhibit doctor-shopping behaviour similar to Sanidah M.A. (1998) study, which showed patients with primary school education were more doctor-shoppers.

In this study, the doctor-shopping patients in both lower and higher household income group were equally distributed. This finding is similar to the finding in Olsen D.M. *et al.* (1976) that revealed 53% of high socioeconomic status and 51% of low socioeconomic status families had shopped for doctors. However, in both studies, the association was not significant.

Chronicity of illness was found to be associated significantly to doctor-shopping behaviour. This similar finding can be seen in other studies (Ngeow T.F. *et al.*, 1981, Sato T. *et al.*, 1995, and Sanidah M.A., 1998). The longer the duration of illness, the more numbers of doctors have been seen. Sanidah M.A. (1998) showed that most patients with respiratory and febrile illness being of acute onset, mostly less than one month duration, consulted only one or two doctors during illness episode. Meanwhile, few patients with chronic illnesses such as musculoskeletal, cardiovascular or skin problems were noted to have more than three previous visits before.

In this study, doctor-shopping was significantly associated with advice or recommendation by somebody e.g. relatives or friends to seek for treatment. Lay decision-making about ill health and when or where to seek medical treatment is a social process which often involve at least one other person apart from the sufferer. For instance, between a married couple, it is expected that the spouse may influence the sufferer to seek treatment. The finding was similarly seen in Sato T. *et al.* (1995) but the association was not significant. However, in another study by Sato T. *et al.* (1999) influence or advice from somebody was noted significantly associated with patients who visited another medical facility for second opinion.

Majority of patients were noted expecting improvement more than a simple explanation of their illness. Doctor-shopping patients in this study were also noted to have high

expectation for an effective management in this hospital. However, it was not significantly associated with doctor-shopping behaviour.

This study revealed more than half of doctor shoppers' thought that they have a serious disease, however the association was not significant. In Sato T. *et al.* (1995), the association was not significant between thinking of having cancer and doctor-shopping patients. However, Sato T. *et al.* (1999) showed a significant association between feeling anxious about illness with second-opinion behaviour. Generally, in second-opinion patients, they accept the diagnosis of the initial consultant and are satisfied with the encounter, but wish for confirmation by another physician (Sato T. *et al.*, 1999).

## **CONCLUSION**

Prevalence of doctor-shopping in FMC, HUSM can be considered high. The main reason for doctor-shopping was no improvement of symptoms. Older age group, employed patients, chronicity of illness and advice by somebody else, were significantly associated with doctor-shopping behaviour.

In conclusion, when obtaining a medical history, doctors should ask their patients about the previous visits to other medical facilities. By understanding the patient previous practices, both doctor-patient communication and clinical care could be improved. Furthermore, the importance of giving clear and accurate explanations and education should be emphasized in order to maintain a good doctor-patient relationship and encourage the patients to maintain a continuity of care without shopping for doctors in which will enhance the outcome.

We need to consider suggestion for further evaluation and review of the healthcare system such as to register each person under one family doctor. Evaluation on the quality of services provided e.g. waiting time should be continued and need further intervention.

## **ACKNOWLEDGEMENT**

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## **REFERENCES**

- Aljunid, S.M. 1996. Role of primary care doctors in private sector. *National Conference on Managed Care: Challenges Facing Primary Care Doctors*. Retrieved on 31<sup>st</sup> March, 2004 from <http://www2.jaring.my/pcdom/cmccrole.htm>
- Kasteler, J., Kane, R.L., Olsen, D.M. 1976. Issue underlying prevalence of doctor-shopping behaviour. *Journal of Health and Social Behaviour* 17 : 328-339.
- Lo, A.Y., Hedley, A.J., Pei, G.K., Ong, S.G., Ho, L.M., Fielding, R., Cheng, K.K., Daniel, L. 1994. Doctor-shopping in Hong Kong: Implications for quality of care. *International Journal of Quality Health Care* 6(4) : 371-381.



Ngeow, T.F, Ong, C.B, Chia, S.F. 1981. Doctor hopping in general practice: A Malaysian survey. *Australian Family Physician* 10 : 397-403.

Olsen, D.M., Kane, R.L., Kasteler, J. 1976. Medical care as a commodity: an exploration of the shipping behaviour of patients. *Journal of Community Health* 2(2) : 85-91.

Rusli, N., Naing, N.N., Razlan, M., Mulyati, M. 1995. Health seeking behaviour amongst outpatients at Community Health Clinic, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan. *Malaysian Journal of Medical Sciences* 2 : 87-94.

Safran, D.G., Montgomery, J.E., Chang, H., Murphy, J., Rogers, W.H. 2001. Switching doctors: Predictors of voluntary disenrollment from a primary physician's practice. *The Journal of Family Practice* 50(2). Retrieved on 3<sup>rd</sup> November, 2002 from [http://www.jfponline.com/content/2001/02/jfp\\_0201\\_01300.asp](http://www.jfponline.com/content/2001/02/jfp_0201_01300.asp)

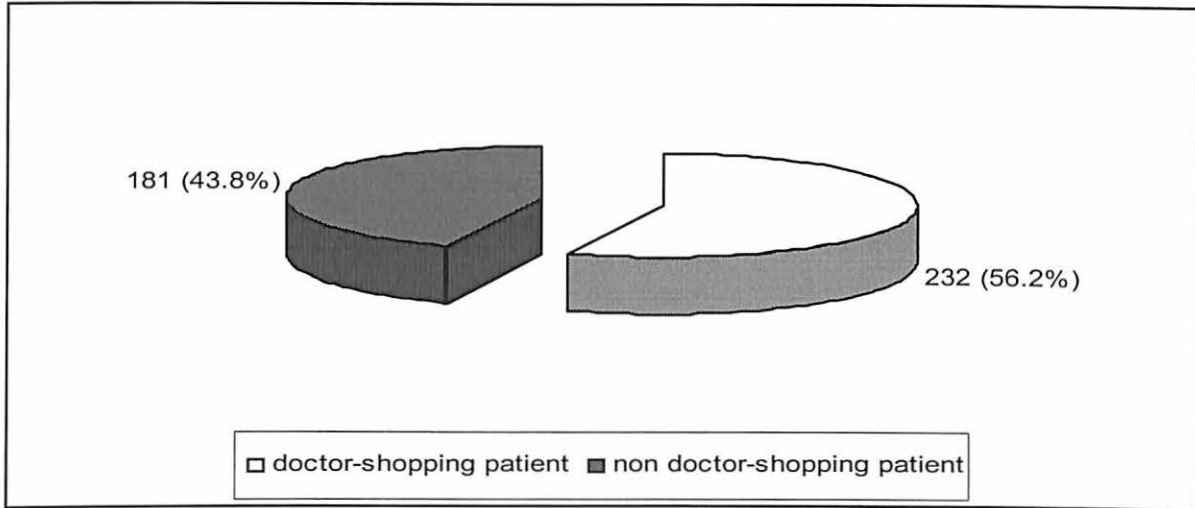
Sanidah, M.A. 1998. A study of doctor-shopping among new patients attending Primary Care Clinic University Hospital, Kuala Lumpur. M.Med dissertation (unpublished). Malaya University.

Sato, T., Takeichi, M., Hara, T., Koizumi, S. 1999. Second opinion behaviour among Japanese primary care patients. *British Journal of General Practice* 49(444) : 546-550.

Sato, T., Takeichi, M., Shirahama, M., Fukui, T., Gude, J.K. 1995. Doctor-shopping patients and users of alternative medicine among Japanese primary care patients. *General Hospital Psychiatry* 17 : 115-125.

**Table 1. Sociodemographic characteristic of 413 adults patients attending FMC from August to December, 2003.**

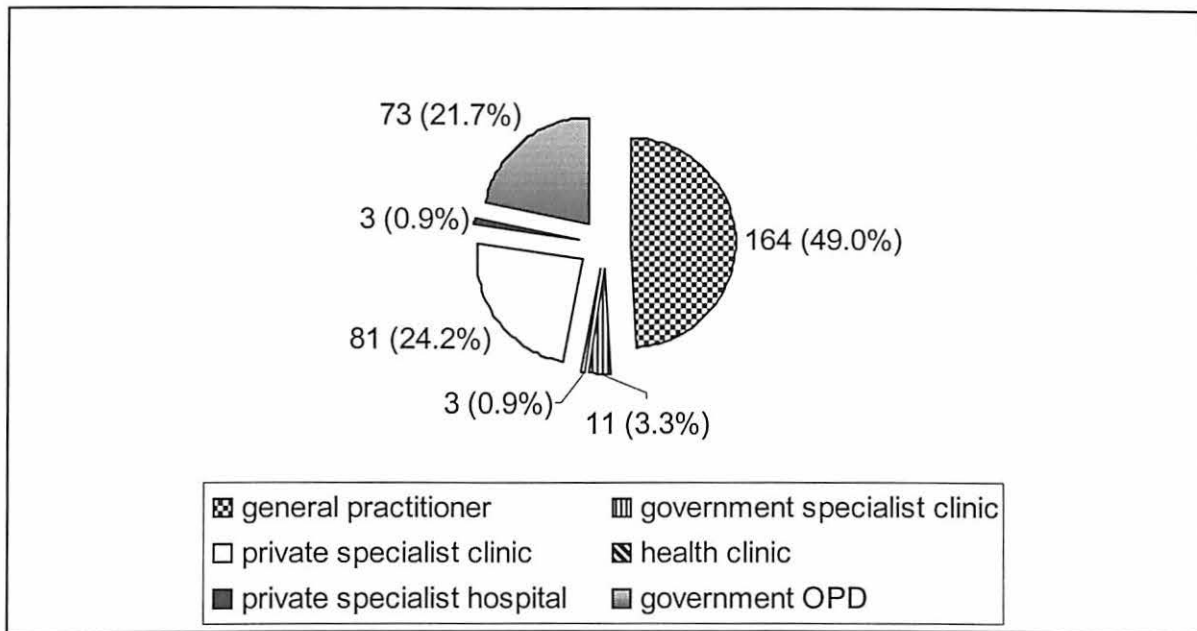
	Distribution of respondent (n=413) Number (%)
<b>Age</b>	
Years (mean $\pm$ SD)	37.7 $\pm$ 16.5
<b>Gender</b>	
Female	229 (55.4)
Male	184 (44.6)
<b>Ethnicity</b>	
Malay	371(89.8)
Chinese	28 (6.8)
Indian	6 (1.5)
Others	8 (1.9)
<b>Marital Status</b>	
Married	241 (58.4)
Not married	172 (41.6)
<b>Occupational Status</b>	
Employed	209 (50.6)
Unemployed	204 (49.4)
<b>Education level</b>	
Low education	300 (72.6)
High education	113 (27.4)
<b>Household income</b>	
Low (RM1,000 or less)	216 (52.3)
High (more than RM1,000)	197 (47.7)



**Figure 1. Distribution of doctor-shopping patient**

**Table 2. Number of medical facilities visited**

Number of visited medical facilities	Frequency	Percentage (%)
0	171	41.4
1	124	30.0
2	66	16.0
3	28	6.8
4	15	3.6
5	7	1.7
6	2	0.5
<b>Total</b>	<b>413</b>	<b>100.0</b>



**Figure 2. Types of previous consultation (n=232)**

**Table 3. Reasons for changing doctors**

Reason	Frequency n=232	Percentage (%)
No Improvement	147	63.1
Worsening condition	51	22.0
Recommendation by somebody	77	33.2
Inconvenience	42	18.1
Previous doctor's negative attitude	17	7.3
High doctor's fee	25	10.8
Side-effects of treatment	10	4.3
Request for further investigation	53	22.8
Others ( e.g. request medication or other therapies, request screening etc.)	29	12.5

The percentages were based on 232 respondents who changed doctors without being professionally referred. The total percentage exceeds 100% because majority of respondents had more than one reason.

**Table 4. The associated sociodemographic factors of doctor-shopping patient**

	Doctor-Shopping Patient		P value
	No	Yes	
	n %	n %	
Gender			
Male	71 (39.2)	113 (48.7)	0.054
Female	110 (60.8)	119 (51.3)	
Ethnicity			
Malay	167 (92.3)	204 (87.9)	0.148
Non-Malay	14 (7.7)	28 (12.1)	
Marital Status			
Married	101 (55.8)	139 (59.9)	0.401
Not married	80 (44.2)	93 (40.1)	
Occupational Status			
Employed	78 (43.1)	131 (56.5)	0.007*
Not employed	103 (56.9)	101 (43.5)	
Education Level			
Low education	129 (71.3)	171 (73.7)	0.582
High education	52 (28.7)	61 (26.3)	
Household Income			
Low income	101 (55.8)	115 (49.6)	0.208
High income	80 (44.2)	117 (50.4)	

**Table 5. The characteristic behaviour factors of doctor-shopping patient**

Variables	Doctor-shopping patient	
	No n (%)	Yes n (%)
<b>Duration of illness</b>		
Less than 1 week	80 (44.2)	23 (9.9) ***
1 week to 1 month	43 (23.8)	62 (26.7)
From 1 to 12 months	40 (22.1)	63 (27.2)
More than 1 year	18 (9.9)	84 (36.2)
<b>Condition of illness</b>		
Getting worse	65 (35.9)	71 (30.6)
No improvement	96 (53.0)	128 (55.2)
Getting better	15 (8.3)	32 (13.8)
None	5 (2.8)	1 (0.4)
<b>High expectation of effective management</b>		
Yes	153 (84.5)	199 (85.8)
No	2 (1.1)	0 (0)
Unknown	26 (14.4)	33 (14.2)
<b>Expectation of patient</b>		
Improvement	150 (82.9)	195 (84.1)
Explanation	31 (17.1)	37 (15.9)
<b>Thinking of serious disease</b>		
Yes	55 (30.4)	136 (58.6)
No	119 (65.7)	90 (38.8)
Unknown	7 (3.9)	6 (2.6)
<b>Advised by somebody</b>		
Yes	109 (60.2)	169 (72.8)**
No	72 (39.8)	63 (27.2)

**Table 6. Multivariate logistic analysis of doctor-shopping behaviour (final model)**

Risk Factors	Adjusted OR	95% Confidence Interval	p value
Age	1.02	1.00-1.03	0.007
Occupation status	2.53	1.61-3.97	<0.001
Duration of illness	0.26	0.16-0.40	<0.001
Advised/Recommendation by somebody	2.17	1.36-3.46	0.001



**DOCTOR-SHOPPING BEHAVIOUR AMONGST ADULT PATIENTS  
ATTENDING FAMILY MEDICINE CLINIC, HOSPITAL  
UNIVERSITI SAINS MALAYSIA, KUBANG KERIAN, KELANTAN**

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MASTER OF MEDICINE (FAMILY MEDICINE)**

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**ABBREVIATIONS**

FMC	Family Medicine Clinic
HUSM	Hospital Universiti Sains Malaysia
KRK	Klinik Rawatan Keluarga
OPD	Outpatient Department
RM	Ringgit Malaysia
SPSS	Statistical Package for Social Science
T/CM	Traditional/Complementary Medicine
UHKL	University Hospital Kuala Lumpur

## ABSTRAK

**Tajuk:** Tabiat bertukar-tukar doktor di kalangan pesakit dewasa Klinik Rawatan Keluarga, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan.

**Pengenalan:** Tabiat bertukar-tukar doktor adalah merujuk kepada perbuatan bertukar doktor setelah mendapatkan rawatan dalam sesuatu episod penyakit. Ia biasanya boleh membawa keburukan dan masalah kesihatan serta sosial pesakit tersebut.

**Tujuan:** Untuk mengenalpasti prevalens dan faktor-faktor berkaitan dengan tabiat bertukar-tukar doktor di kalangan pesakit dewasa yang mengunjungi Klinik Rawatan Keluarga (KRK), Hospital Universiti Sains Malaysia (HUSM).

**Metodologi:** Kajian ini adalah satu kajian keratan rentas yang melibatkan 442 pesakit dewasa berusia 18 tahun ke atas. Ia dijalankan melalui cara temuduga secara bersemuka dengan menggunakan soalselidik. Data telah dianalisa menggunakan SPSS versi 11.

**Keputusan:** Sebanyak 56% daripada pesakit yang dikaji telah didapati memenuhi kriteria pesakit yang bertukar doktor ('doctor-shopping'). Kebanyakan mereka telah mengunjungi pengamal perubatan swasta sebelum datang ke KRK. Satu perlima daripada responden

telah mendapatkan rawatan alternatif untuk episod penyakit yang dihidapi. Sebab utama bertukar doktor ialah tiada perubahan gejala penyakit. Tabiat bertukar doktor didapati mempunyai hubungan secara signifikan dengan kumpulan pesakit yang berumur lebih tua dan mereka yang bekerja. Walaupun tabiat ini didapati tinggi di kalangan pesakit yang telah berkahwin, wanita dan mereka yang berpelajaran rendah tetapi hubungan didapati tidak signifikan dengan tabiat bertukar doktor. Antara faktor-faktor yang signifikan bagi tabiat ini adalah tempoh penyakit yang kronik, dan menerima nasihat untuk menerima rawatan daripada seseorang yang lain.

**Kesimpulan:** Prevalens tabiat bertukar-tukar doktor adalah tinggi di kalangan pesakit dewasa di KKK. Oleh yang demikian, adalah sangat penting untuk mengenalpasti tabiat ini di kalangan pesakit supaya masalah berkaitan dengan tabiat ini dapat dielakkan. Kita juga seharusnya menekankan kepentingan perhubungan yang baik antara doktor dan pesakit, dan memberi penerangan dan pendidikan kesihatan yang jelas supaya jagaan baik dapat diberikan secara berterusan.

## ABSTRACT

**Title:** Doctor-shopping behaviour amongst adult patients attending Family Medicine Clinic, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan.

**Introduction:** Doctor-shopping refers to the changing of doctor without professional referral in a single episode of illness. It leads to some health risk and social problems.

**Objectives:** To determine the prevalence and associated factors of doctor-shopping behaviour amongst adult patients attending Family Medicine Clinic (FMC) Hospital Universiti Sains Malaysia (HUSM).

**Methodology:** It was a cross-sectional study conducted on 442 adult patients aged 18 years and above. It was conducted as face to face interview using questionnaires. Data were analysed using SPSS version 11.

**Results:** Fifty-six percents of these patients met our criteria for doctor-shopping patients. Most of the patients went to general practitioners for consultation prior to FMC visit. One-fifth of the respondents went for alternative treatment for the current illness episode. The main reason for changing doctors was due to no improvement of the illness. Doctor-

shopping behaviour was found to be significantly associated with older age group and employed patients. Doctor-shopping patients were found to be high among married people, females and patients with low education level, but the associations were not significant. The significant associated factors of doctor-shopping behaviour were chronic duration of illness, and advice to seek treatment from somebody.

**Conclusion:** Prevalence of doctor-shopping behaviour amongst adult patients attending FMC was high. It is important to recognise and anticipate problems related to doctor-shopping behaviour. We need to emphasise on the importance of a good doctor-patient relationship, and give accurate explanation and health education to maintain a proper continuity of care.

## CHAPTER 1 INTRODUCTION

The term doctor-shopping refers to the changing of doctor without professional referral in a single episode of illness. Doctor-shopping behaviour has already been reported in many countries including Hong Kong, Japan and also Malaysia ( Lo A.Y. *et al.*, 1994, Sato T. *et al.*, 1995, and Sanidah M.A., 1998, unpublished).

Understanding the doctor-shopping behaviour is particularly important in a setting where a wide range of resources and facilities are available such as in Malaysia. Rusli N. *et al.* (1995) described that majority of outpatient had adopted the second mode of treatment after an apparent failure of the first mode of therapy, went to government or private doctors with small proportion seeking traditional healers.

Doctor-shopping leads to a waste of patient's time and money, depriving the doctor an opportunity to review diagnosis, increasing the chance of drug interactions, and it can even contribute to changing clinical picture of the patient from previous treatment (Ngeow T.F. *et al.*, 1981).

There are several factors contributing to these problems, for example the patient may not have enough medical knowledge about the nature of the disease, poor compliance to the medication, poor doctor-patient relationship (Kasteler J. *et al.*, 1976), high cost of services and inconvenience of the location and time (Safran D.G. *et al.*, 2001). The factors

are not only confined to the patients or doctors, it may also be contributed by the types of illness and other disease factors (Sato T. *et al*, 1995).

This doctor-shopping phenomenon is also related to the implication of any healthcare system. In countries like Japan, health care costs are not an important issue for patients since more than 99.5% of the people are covered by one of six health insurance plans (Sato T. *et al*, 1995). So, patients can freely determine the type of treatment they receive or change to any practitioner they prefer. In Malaysia, patients are free to choose different doctors for their illness because most people are not allocated to any family or primary care doctor (Aljunid S.M., 1996). Other weaknesses in the healthcare services provided e.g. quality of the treatment given should also be identified in view to reduce the doctor-shopping behaviour.

Primary care doctors need to be aware with problems and factors involved in this doctor-shopping behaviour, to be able to avoid and anticipate patients from disappointment or harmful approaches.



## CHAPTER 2 LITERATURE REVIEW

### 2.1 Definition

Doctor-shopping behaviour is a phenomenon familiar to most of primary care practitioners. The term 'doctor-shopping' is also often referred to 'doctor hopping' or 'doctor switching'.

Kasteler J. *et al.* (1976) defined doctor-shopping as the consulting of a second doctor at any time for the same episode of an illness without referral. Many other studies used the same definition (Ngeow T.F. *et al.*, 1981, Lo A.Y. *et al.*, 1994, and Sanidah M.A., 1998). In the other hand, Sato T. *et al.* (1995) defined doctor-shopping patients as patients who had visited two or more medical facilities with the same complaint. This difference is because in a subsequent study, Sato T. *et al.* (1999) actually defined behaviour of a patient who visited a second doctor as a second opinion behaviour.

### 2.2 The implication of doctor-shopping behaviour

This doctor-shopping behaviour usually resulted in wasted time and higher health cost. Besides, it can also generate anxiety and apprehension. It deprives the doctor of an opportunity to review his diagnosis and treatment, increases the chance of drug interaction and contributes to a changing clinical picture resulting from previous therapy (Ngeow T.F. *et al.*, 1981).

A study by Demers M. (1995) shown that a proportion of the study population obtained ambulatory care from a high number of physician during the year, leading to high expenses. The patients who obtained ambulatory care from more than 20 physicians received 10 times more medical services than the overall patient population, and the mean cost per patient for ambulatory care was also 10 times higher.

Doctor-shopping behaviour was also seen in parents who used their children as a proxy patient. Parents who take such children from doctor to doctor are frequently disturbed themselves. In addition from wasted in time and money, they also cause absenteeism from school. Absence from school had been reported ranged from 40 to 200 days a year (Woollcott P. *et al.*, 1982).

### **2.3 Prevalence**

The phenomenon of doctor-shopping behaviour has been documented, especially after the growth of consumerism in the 1970s. However, the prevalence of doctor-shopping patient among the general population is varied.

A survey conducted by three general practitioners in 1978 showed the prevalence of doctor-shopping patients in 3 different towns in the state of Johore was 6% (Ngeow T.F. *et al.*, 1981). In contrast, a study done 20 years later in the Primary Care Clinic, University Hospital Kuala Lumpur had shown the prevalence of doctor-shopping patients was 60% (Sanidah M.A., 1998).

Meanwhile outside Malaysia, surveys done in Hong Kong on samples attending general outpatient department in 1989 and 1990 found that the prevalence of doctor-shopping was 38% and 36% respectively (Lo A.Y. *et al.*, 1994). In Japan, Sato T. *et al.* (1995) had shown the prevalence of doctor-shopping patients was 23% among patients attended general medical clinic.

## **2.4 Factors associated the doctor-shopping behaviour**

Many factors contribute to the doctor-shopping behaviour. These factors can be considered in relation to the illness, the patient and the doctor.

### **2.4.1 The illness**

A chronic medical problem is highly seen in patients shopped for doctors. The number of doctors previously consulted was in general related to the duration of symptoms or chronicity of illness. Thus, in a simple cough or febrile illness, the patients could have consulted only one or two doctors during each illness episode (Sanidah M.A., 1998), whereas in more chronic conditions, such as skin disorders, a greater proportion of patients consulted four or more doctors (Ngeow T.F. *et al.*, 1981). The other studies by Sato T. *et al.* (1994) and Sanidah M.A. (1998) also revealed a significant association of doctor-shopping patients with long duration of symptoms.

A few of the studies also shown that many doctor shoppers gave no improvement of the illness is one of the reasons why they changed doctors. About 75% of patients in Hong Kong ( Lo A.Y. *et al.*, 1994) and 41% in Japan ( Sato T. *et al.*, 1995) changed doctors because of no improvement of the illness. Meanwhile in Johore, about 60% (Ngeow T.F. *et al.*, 1981) and the recent study in Kuala Lumpur shown about 52% of doctor shoppers gave the same reason (Sanidah M.A., 1998).

Doctor-shopping behaviour has also been reported having association with psychological disorders. Some patients with distressing psychological problems, usually did not satisfied with the treatment they received, then requested to change a doctor or consult a traditional healer. Sato T. *et al.* (1995) described that there was a significant association of psychiatric symptoms with doctor-shopping patients. A study of high utilisers of medical care using psychological screening questionnaires and structured interviews has been reported in the United States and shown that 51% of high utilisers of health care in two primary care clinics were identified as distressed (Katon W. *et al.*, 1990). In addition, two-thirds of these patients had a lifetime history of major depression according to the Diagnostic Interview Schedule (DIS).

#### **2.4.2 The patient**

Olsen D.M. *et al.* (1976) has described that doctor shoppers were more from younger age group, whom were better informed about medical specialties, less self reliance, more hypochondriac with less positive attitudes toward medical care system. A

study done by Kasteler J. *et al.* (1976) also found that the prevalence of doctor-shopping was high in high socioeconomic status group. Sato T. *et al.* (1995) found that patients with low education level tend to exhibit more doctor-shopping behaviour than those with high education level. However, there were no differences related to sex, age, occupation, and marital status.

Doctor-shopping behaviour may also be related to patients' own problems. Solisbury C.J. (1989) had shown that 83% patients changed doctors because they had moved to another area, 5% patients wanted a more convenient surgery, and the other 5% of patients dissatisfied with the previous doctor.

Doctor-shopping patients were the ones who believed they were in poor health and getting worse, showed an inability to understand their illness, and did not believe in the doctor's diagnosis and treatment. They also expected improvement rather than a simple explanation of their disease and also had high expectation of a medical school hospital (Sato T. *et al.*, 1995).

Often the patient has his own concept of illness and when the doctor's explanation does not concur with his own, he expresses his disapproval by consulting another doctor (Ngeow T.F. *et al.*, 1981).

Influence or recommendation by others, either friends or relatives is also a reason for a patient to change a doctor. This reason was found in 12.4% of the doctor-shopping

patients in earlier study done by Ngeow T.F. *et al.* (1981) and 13.4% in the study done by Sanidah M.A. (1998).

Sanidah M.A. (1998) also showed that majority of the patients had been consulted general practitioner and only 20% of them had been to a government hospital or health centre. It was probably due to general practitioner services are easily available at most of the time and places and more convenience. However, only one percent of the doctor shoppers had consulted private hospital. This could be due to the higher fees compared to the general practitioner clinic, and less availability of the private hospital.

Many patients are dependent on certain drugs – most often benzodiazepines (Gerada C. *et al.* 1997). These patients present to various primary care doctors, where they sometimes practice manipulation that may not be easy to recognize or counter. Many of these patients are consuming a large quantity of drugs that not easy for any doctor to fulfill their needs. They then become doctor shoppers.

In a small survey by Klienschmidt R. *et al.* (1995) conducted at the Hospital Alcohol and Drug Services, Royal Brisbane Hospital, thirty patients were recognized as doctor shoppers. The most frequent stated reasons were drug dependency (13 patients) followed by inability to cope and concurrent alcohol problems. It was stated that the daily consumption of tablets varied between 10 and 500, with a median of 40 to 50 tablets. These patients have some features in common. They were reported to have a well rehearsed story, tend to express reservations about other forms of treatment than the

prescription of the drugs they seek, are familiar with drug names, and tend to punish or reward the doctor according to the doctor's response. Several patients were aware of other doctor shoppers and the existence of lists of easy prescribers was reported (Klienschmidt R. *et al.*, 1995).

### **2.4.3 The doctor**

The factors which influenced patients to shop or change physician are also mainly based on doctor's problems.

According to Kasteler J. *et al.* (1976), factors related to the tendency to shop for doctors in both upper and lower income groups included a lack of confidence in the doctor's competences, unwillingness of doctors to spend time talking to the patient, patient's hostile feeling towards doctors, inconvenient location and hours, high cost of services, and unfavourable attitudes towards the doctor's personality.

Unsatisfactory doctor-patient relationship is one of the reasons for patients to change doctors. However, only a small proportion of study population gave unsatisfactory attitude of doctors as one of the reasons they shopped for doctors. It was 2.7% in Ngeow T.F. *et al.* study (1978) and 4% in Lo A.Y. *et al.* (1994).

At National Conference on Managed Care: Challenges facing primary care doctors, Aljunid S.M. (1996) reported most patients were not satisfied with the attitude of the

doctors and health workers in the public sector. The public sector staffs were criticised for being rude, unhelpful, easily angered, rush through the consultation, showed no respect to patients and always absent from their posts. They described private doctors as polite, helpful, patient, and spend enough time with their patients. The only thing that patients are not satisfied with the private health care is the charges. They described the charges as high and unstandardised. They also suggested that private doctors should display their charges since they only know their charges after consuming the services and have no choice but to pay for the services.

## **2.5 Related issues in Malaysian health care system**

The steady improvement in the health status of the Malaysian population in the last thirty years is concomitant with the rapid economic development of the country. From the time of Independence in 1957 up to the early 1980s, the Malaysian economy enjoyed high gross domestic product (GDP) up to an average of 6 percent annual growth (World Bank, 2004). This resulted in rising standards of living which had a positive impact on health and the quality of life.

The changing disease pattern reflects the nature of the development that is taking place. Infectious diseases – “diseases of underdevelopment”, nonetheless diminish in relative importance as more and more people suffer and die from diseases of stress and degeneration. Heart disease, cancers, motor vehicle accidents are problems which reflect the impact of industrialisation and urbanisation (Chee H.L., 1990a).



The organisation of government health services has basically not changed since colonial times (Chee H.L., 1990b). The state medical and health services, initially the responsibility of the respective states, was eventually centralised under the Ministry of Health, where it has remained up till now.

Perhaps the obvious achievements of the government health care delivery system are in increasing quantities of health care, in terms of health facilities and personnel, and increasing coverage of the population, especially through the rural health service. However, these achievements are marred by inequalities which have persisted since Independence. Inequalities – between urban and rural - are seen in the distribution of financial resources, hospital beds, and medical personnel, most glaringly in the distribution of doctors (Chee H.L., 1990b).

Due to these problems, sometimes patients bypass these small hospital or health clinics to go to bigger ones with more beds and facilities, and availability of specialist services.

In addition, the referral system usually does not work well. The transfer of information between primary care doctors in the private sectors and public sector doctors are poor leading to unnecessary repeat of investigations and ineffective treatment (Aljunid S.M., 1996). It is not only involved the private sector, perhaps the primary care personnel in the government service centres. Often the problem is worsened and annoyed to some of

the primary care doctors when there is a failure to refer back the patients to them after cases have been managed in a hospital or at a specialist centre.

In developing countries including Malaysia, primary care doctors were not allocated eligible group of population under their care. Practicing lists are almost non-existent. Patients are free to choose different primary care doctors for different episode of illness or even for same episode of illness. Aljunid S.M. (1996) found that 12.5% of users of public facilities do not have regular provider and the percentage is bigger among private sector users (21%). This kind of system actually allows for a higher percentage of doctor shoppers in Malaysian population. However, the proportions of doctor shoppers were no different between users in both sectors and it ranges between 17.6% to 21.1%.

Not only patients can choose the types of health care they determine, they also can choose to seek treatment at any alternative medicine or traditional and complementary services available. Traditional and Complementary Medicine (T/CM) practice is other than practice of medicine or surgery by registered medical practitioners, as defined in Medical Act 1971 (Ministry of Health, 2001).

T/CM is becoming more popular throughout the world and nationwide, not only among public but also among healthcare providers. In Malaysia, there are few major types of groups such as the traditional Malays medicine, Chinese medicine, Indian, homeopathy and the other complementary group.

Sato T. *et al.* (1995) reported that it is common in Japan for patients to visit university hospitals with high expectations as the last treatment choice when their symptoms have not been relieved by general practitioners treatment and/or the use of alternative medicine. Ngeow T.F. *et al.* (1981) also reported about 16% of doctor-shoppers admitted to consulting traditional 'medical' persons during the illness episode. Although this percentage was not high in previous study, the issue of alternative or traditional medicine is still important since the popularity of this type of treatment is rapidly increased presently.

By recognising the doctor-shopping behaviour and the associated factors, a primary care doctor can do a great deal by managing patients appropriately and further avoid this unnecessary and sometimes harmful behaviour. Since there were not many studies done regarding the doctor-shopping behaviour in Malaysia, this study was aimed to determine the prevalence and associated factors of doctor-shopping behaviour especially in Hospital Universiti Sains Malaysia, and generally in Kelantan. It was different from previous studies done by Ngeow T.F *et al.* (1981) and Sanidah M.A (1998) because it involved only adult patients. The paediatric patients were not chosen because they usually were not the decision-maker, and it would not reflect a true behaviour of a doctor-shopping patient.

## **CHAPTER 3 OBJECTIVES**

### **3.1 General objective**

To determine the prevalence and factors influencing the doctor-shopping behaviour amongst adult patients attending Family Medicine Clinic (FMC), HUSM from August – December 2003.

### **3.2 Specific objectives**

1. To determine the prevalence of doctor-shopping behaviour amongst adults patients attending the FMC, HUSM.
2. To determine the associated factors of doctor-shopping behaviour.

### **3.3 Hypotheses**

- i. The prevalence of doctor-shopping behaviour in FMC will be higher than the prevalence in UHKL.
- ii. Respondents who are Malays, employed, having low education and high income will be more commonly involved in doctor-shopping behaviour.
- iii. Doctor-shopping behaviour is higher in patients with chronic duration of illness, high expectation of management, who think that they have serious disease, received advice from somebody, and who used alternative medicine for the illness.

## **CHAPTER 4 METHODOLOGY**

### **4.1 Study design**

This was a cross-sectional study which was conducted from August to December 2003 at the Family Medicine Clinic (FMC), Hospital Universiti Sains Malaysia (HUSM), Kubang Kerian, Kota Bharu, Kelantan.

### **4.2 Study area**

This study was conducted at the FMC, HUSM. This hospital is one of the teaching hospital in Malaysia, situated in the east coast of Peninsular Malaysia. It also functioned as a tertiary or referral hospital in this region.

The FMC was previously known as Community Medicine Clinic. Since 2001, the FMC has been under the care of Family Medicine Department. It is the only clinic in HUSM providing a primary care service. The other clinics in HUSM are the specialty clinics, which handle a secondary and tertiary care. The FMC accepts walk-in patients such as new patients attending with or without referral letter. Referred patients from the other specialty clinics are also accepted.

### 4.3 Study population

This study involved all new or inactive patients aged 18 years old and above who attended this clinic during the study period. The inactive patients were considered if they did not have a visit to the FMC for the past one year.

Those who agreed to participate in the study and able to communicate in Malay or English language were included. The exclusion criterias were patients who refused to give verbal informed consent, those who were on follow-up and the pediatric patients.

### 4.4 Study preparation

Literature review was conducted during preparation and throughout the study. Approval for the study was obtained from Research and Ethics Committee, School of Medical Sciences, Universiti Sains Malaysia on 19<sup>th</sup> September, 2002.

### 4.5 Study sample

The calculation of sample size is based on the formula for single proportion as below:

$$N = (Z/\Delta)^2 P (1-P)$$

N = sample size

P = probability (%) in this study

Z = 1.96

$\Delta$  = 0.05

From previous study by Sanidah M.A. (1998), P=60 percent of patient were doctor shopping patients. Based on this study, the sample was calculated using  $P=0.6$  (60%). The calculated sample was 442 including the 20% drop out rate..

Based on the calculated sample size and average sample per day of 5 to 10 respondents, the data collection was planned to be collected in a period of four months. A total of 442 patients were interviewed during the determined period from August to December 2003.

#### **4.6 Method of data collection**

Data collection was done through an interview. Each subject first had been asked for verbal consent and then interviewed by using a questionnaire consisted of identification data and doctor-shopping questions. The patients were informed regarding the purpose of the study and the information given was kept in confidential.

The interview was conducted by the researcher and five medical officers. Prior to the data collection, all the medical officers were briefed. Supervision by the researcher to the doctors involved was carried out.

The questionnaire was structured to contain the following aspects (refer Appendix 1):

1. Sociodemographic data of the respondent
2. Doctor-shopping questionnaire which included 15 questions related to types and number of visits to medical facilities, the use of alternative medicine, and patients' health status such as duration of illness, condition of illness, reason for changing doctor, and so forth.

A pilot study was carried out in April 2003 in the FMC and 45 patients were randomly selected. The aim of the pilot study was to validate the questionnaire, and to reduce any shortcoming of the questionnaire design. Following the pilot study, some modification of the questionnaire was made and followed by actual data collection.

#### **4.7 Definition of variables**

##### **4.7.1 Doctor-shopping patient**

Doctor-shopping patient was defined as a patient who visited at least one medical facility before coming to FMC for the same illness episode, and they had not been referred by the first visited or consulted doctor. The non doctor-shopping patient was defined as a patient who did not visit any medical facility before, or when the patient was referred to FMC by the first consulted doctor.



#### **4.7.2 Education level**

The respondents who had education up to secondary school or completed up to High School Certificate, and those who did not have any formal education were defined as having low education level. Those who further their study after High School Certificate (including college, university and others) were defined as having high education.

#### **4.7.3 Household income**

The household income was divided into two groups; low household income and high household income. Less than RM1,000 household income per month was considered as low household income, and more than RM1,000 per month as high household income. The RM1,000 cut-point was chosen in this study based on classification done in previous studies by Rusli N. *et al.* (1995) and Sanidah M.A (1998).

#### **4.8 Statistical analysis**

Data collected were entered and analysed by using SPSS version 11. Independent student t-test was used to calculate the mean and standard deviation for age with the level of significance set at  $p < 0.05$ . Chi-square test was used to assess the association between doctor-shopping patients and categorical variables. Multiple logistic regression analysis was used when multiple variables were considered simultaneously. The outcome (dependent) variable was doctor-shopping patient or non doctor-shopping patient. All

independent variables that possibly related with doctor-shopping were entered into Logistic Regression Model. Result presented by 95% confidence interval, odd ratio, and significant level of  $p < 0.05$ .

## CHAPTER 5 RESULTS

A total of 442 adult patients were interviewed during four months period. However only 413 of patients were completed the questionnaires. Twenty-nine of patients were found failed to complete answering the questionnaires. Drop out rate was 6.6%.

### 5.1 Sociodemographic characteristics of respondents

Mean age of the respondents was 37.7 years old ( $SD \pm 16.5$ ), ranging from the age of 18 years to the age of 88 years old.

Two hundred and twenty-nine (55.4%) of the respondents were females while 184 (44.6%) were males. Majority of the respondents were Malays (89.8%), followed by Chinese 28 (6.8%), Indian 6 (1.5%) and others 8 (1.9%).

Two hundred and forty-one (58.4%) respondents were currently married while 172 (41.6%) were unmarried. The unmarried respondents were mainly single people, the rest were the widows and divorcee.

The occupational status distribution of the respondent population was almost equal with slightly more employed respondents (50.6%) than unemployed (49.4%). The employed respondents were mainly government servant. Majority of the unemployed respondents were students and housewives.

Majority (72.6%) of respondents belong to the low educational status group. This group included those who were educated as far as the secondary school. Only 113 (27.4%) had accomplished higher education such as university or college. More than half of respondents fell below to the low household income group with RM1,000 or less per month. Table 5.1 shows the summary of sociodemography of the respondents.

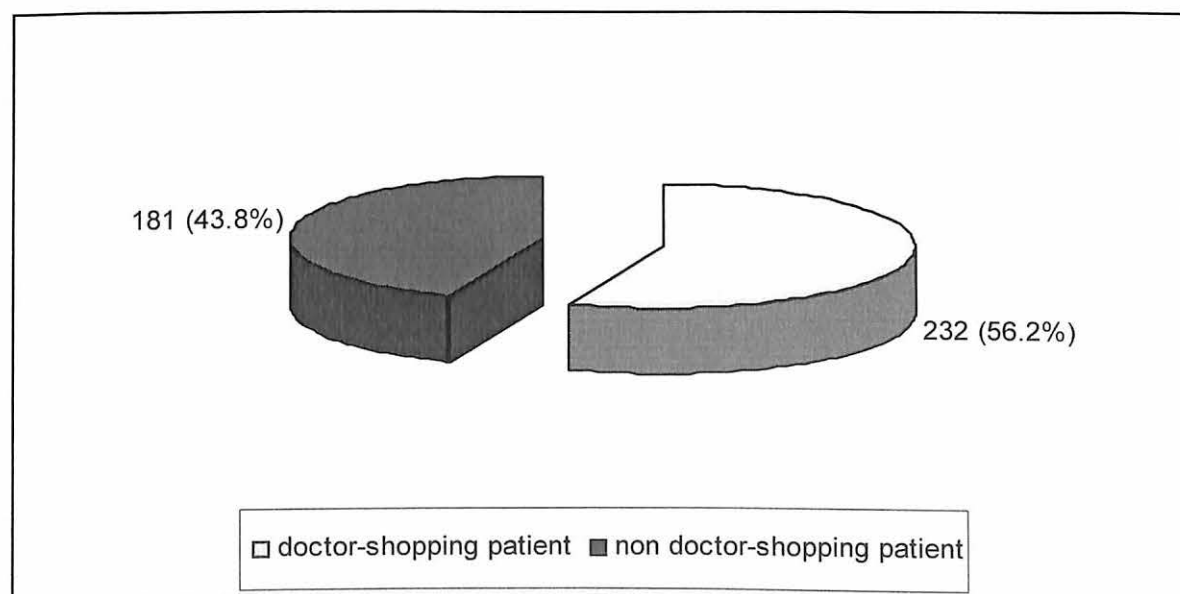
**Table 5.1 Sociodemographic characteristic of 413 adults patients attending FMC from August to December, 2003.**

	Distribution of respondent (n=413) Number (%)
<b>Age</b>	
Years (mean $\pm$ SD)	37.7 $\pm$ 16.5
<b>Gender</b>	
Female	229 (55.4)
Male	184 (44.6)
<b>Ethnicity</b>	
Malay	371(89.8)
Chinese	28 (6.8)
Indian	6 (1.5)
Others	8 (1.9)
<b>Marital Status</b>	
Married	241 (58.4)
Not married	172 (41.6)
<b>Occupational Status</b>	
Employed	209 (50.6)
Unemployed	204 (49.4)
<b>Education level</b>	
Low education	300 (72.6)
High education	113 (27.4)
<b>Household income</b>	
Low (RM1,000 or less)	216 (52.3)
High (more than RM1,000)	197 (47.7)

## 5.2 Doctor-shopping questionnaires

### 5.2.1 Doctor-shopping patient

Two hundred and thirty-two (56.2%) respondents were considered as the doctor-shopping patients. These doctor-shopping patients had visited at least one medical facility before coming to FMC for the same illness episode, and they had not been referred by the first visited or consulted doctor. One hundred and eighty-one (43.8%) respondents had just come to FMC for their first visit, or they came to FMC after being referred by their first consulted doctor. This group of respondents was considered as the non doctor-shopping patients group.



**Figure 5.1** Distribution of doctor-shopping patient

### 5.2.2 Number of medical facilities visited

Table 5.2 shows the number of medical facilities visited among the respondents. Out of 181 non doctor-shopping patients, 171 of them have never visited any facilities before coming to FMC or a first timer. The other 10 from the non doctor-shopping group had one visit to another medical facility before being referred to the FMC by the first visited doctor. Most of the non-first timer visited only one or two medical facilities before. Only two of them had visited 6 different medical facilities before coming to FMC.

**Table 5.2 Number of medical facilities visited**

Number of visited medical facilities	Frequency	Percentage (%)
0	171	41.4
1	124	30.0
2	66	16.0
3	28	6.8
4	15	3.6
5	7	1.7
6	2	0.5
<b>Total</b>	<b>413</b>	<b>100.0</b>