

**FACTORS CONTRIBUTING CONSUMER  
SATISFACTION WITH COMMUNITY  
PHARMACIES IN KOTA KINABALU, SABAH**

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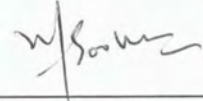


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## CERTIFICATION


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## ABSTRACT

### FACTORS CONTRIBUTING CONSUMER SATISFACTION WITH COMMUNITY PHARMACIES IN KOTA KINABALU, SABAH

This study aims to investigate the relationship between dimension of pharmacy services and consumer satisfaction in community pharmacies. A cross-sectional study was conducted among randomly selected consumers who visited six community pharmacies at Kota Kinabalu, Sabah. Self-administered questionnaires were used to collect data. Data analysis included descriptive statistics, factor analysis, reliability test, multiple regression analysis and hierarchical regression analysis. A total of 180 sets of completed questionnaire were used for data analysis. Most of the respondents (48.9%) were at the age range from 21 to 30 years with the mean age of 35 years old. Regression analysis found that there was a significant relationship among dimension of pharmacy services and consumer satisfaction ( $p \leq 0.001$ ). Four dimensions of pharmacies like attitude of pharmacy/pharmacist ( $p \leq 0.001$ ), availability of OTC drugs and a variety of products ( $p \leq 0.01$ ), pricing ( $p \leq 0.001$ ), and convenient hours ( $p \leq 0.05$ ) were found to have significant positive relationship with consumer satisfaction. However, all the moderating variables of age, income status and employment status indicated there were no moderating effects on the relationship among the dimension of pharmacy services and consumer satisfaction ( $p > .05$ ). This study concluded that there were four key factors contributing consumer satisfaction in community pharmacies at Kota Kinabalu, Sabah. The consumers were most satisfied with the attitude of pharmacy/pharmacist, followed by pricing, availability of OTC drugs and a variety of products and convenient hours. By improving in these key factors, it may provide an opportunity for pharmacist to develop the business strategies for increasing consumer satisfaction.



## ABSTRAK

*Tujuan kajian ini adalah untuk mengkaji hubungan antara dimensi perkhidmatan farmasi dengan kepuasan pelanggan di komuniti farmasi. Satu kajian keratan-rentas telah dijalankan ke atas pengguna secara rawak yang mengunjungi enam buah komuniti farmasi di Kota Kinabalu, Sabah. Soal-selidik yang dikendali sendiri telah digunakan untuk mengumpul data. Penganalisan data termasuklah statistik deskriptik, analisis faktor, ujian reliabiliti, analisis multiple regresi dan hierarchical regresi. Sebanyak 180 set soal-selidik yang lengkap telah digunakan untuk penanalisan data. Kebanyakan umur responden adalah di antara dari 21 ke 30 tahun dengan min 35 tahun. Analisis regresi mendapati hubungan signifikans antara dimensi perkhidmatan farmasi dan kepuasan pelanggan ( $p \leq 0.001$ ). Empat dimensi perkhidmatan farmasi seperti sikap ahli farmasi ( $p \leq 0.001$ ), kesediaan ubat OTC and kepelbagaian produks ( $p \leq 0.01$ ), harga ( $p \leq 0.001$ ), dan masa ( $p \leq 0.05$ ) telah menunjukkan hubungan signifikans yang positif terhadap kepuasan pelanggan. Akan tetapi, semua pembolehubah moderators seperti umur, taraf pendapatan dan taraf pekerjaan menunjukkan kesan moderating yang tidak signifikans bagi hubungan antara dimensi perkhidmatan farmasi dengan kepuasan pelanggan ( $p > .05$ ). Kesimpulan bagi kajian ini mendapati empat faktor yang menyumbang kepada kepuasan pelanggan di komuniti farmasi di Kota Kinabalu, Sabah. Pelanggan adalah paling puas hati terhadap sikap ahli farmasi, diikuti dengan harga, kesediaan ubat OTC and kepelbagaian produks serta masa. Dengan membaiki factor-faktor ini, ia akan memberi peluang kepada ahli farmasi untuk menghasilkan strategi perniagaan bagi mempertingkatkan kepuasan pelanggan.*

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## LIST OF ABBREVIATIONS

DCA	Drug Control Authority
KMO	Kaiser-Meyer-Olkin
MNPC	Multinational Pharmaceutical Companies
OTC	Over-The-Counter
USM	Universiti Sains Malaysia



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## GLOSSARY

<b>Consumer Satisfaction</b>	An integral feeling result from total experience on purchase and consumption of a product and service and overall appraisal in a particular product and service accumulated over time period.
<b>Attitude of Pharmacy/ Pharmacist</b>	It refers to the evaluation of general attitude of pharmacist towards the consumer, and the competency and ability to provide professional information and advices.
<b>Available of OTC Drugs and a Variety of Products</b>	A wide choice of OTC drugs and products to be available in the community pharmacy.
<b>Pricing</b>	The price of the medicines and OTC products.
<b>Convenient Hours</b>	The extent of waiting time to purchase the medicines and OTC drugs, the business hour of pharmacies when comparing to consumer's convenient time and the availability of pharmacist in the community pharmacies.
<b>Convenient Location</b>	The distance between the pharmacy and the consumer's house, working place, hospital, public transport station and the sufficiency of the car park.
<b>Moderator</b>	A variable that can cause a change in terms of the strength of relationship between an independent variable and a dependent variable.
<b>Employment Status</b>	The state of having a job or not.
<b>Income Status</b>	Monthly salary.



## CHAPTER 1

### INTRODUCTION

#### 1.1 Background of Pharmaceutical Industry in Malaysia

In Malaysia, pharmaceutical industry is not well established if compare to the developed countries like United States. According to Frost and Sullivan market research report, Malaysia pharmaceutical industry was valued at RM3.5 billion in 2007, and then, it grew to RM3.8 billion in 2008 and increased to RM4.2 billion in 2009 (Malaysia's pharmaceutical industry reputable: Report, 2010). The total expenditure is estimated to reach RM6.4 billion by 2013 (Chua, Hassali, Shafie and Awaisu, 2010). Thus, these figures showed that there is a growing potential of pharmaceutical industry development from the economic perspective. This is including community pharmacies as well. Most of the pharmaceutical products in Malaysia are imported by multinational pharmaceutical companies (MNPC). The MNPC are mainly selling for their original patented medicines. The local pharmaceutical companies in Malaysia only contribute about 30% of the domestic demand which dominate the manufacturing of generic, over-the-counter/supplement and traditional products (Chua *et al.*, 2010). In year 2009, there are 250 pharmaceutical companies, 374 importers and 962 wholesalers that are registered with the Drug Control Authority (DCA), Malaysia (Malaysia's pharmaceutical industry reputable: Report, 2010).

In Malaysia, there is no coverage of national public health insurance scheme for the citizens' health expenditures (Chong *et al.*, 2010). Currently, Malaysia does not practice separation of prescribing and dispensing function between community pharmacies and general practitioners (Chong *et al.*, 2010; Bahari and Ling, 2010). So, general practitioner clinics are given permission to dispense medicine to their patients. Although Malaysia government provides free medicine in public hospital,

there is an increasingly trend to ask patients for purchasing their own medicines in private sectors (Babar, Ibrahim, Singh, Bukahri and Creese, 2007). Meanwhile, long waiting time and non-availability of medicines may become other contributing factors for patients to acquire their medicine from general practitioner clinics and community pharmacies. A study by Babar and Ibrahim (2003) reported that 42% patients obtained their medicines from community pharmacies whereas 37% from private hospitals or clinics.

Community pharmacies are an important component of healthcare access and provision in community setting (Schommer, Singh, Cline and Hadsall, 2006). Under Malaysia regulation, the community pharmacies are required to be managed and owned with a minimum of 51% ownership by registered pharmacist(s) (Chong, *et al.*, 2010). They are allowed to dispense Class C Poison without prescription under the Malaysian Poison Act 1952. The Class C Poison includes antihistamine, cough mixture and pain killer which normally use for the mild and moderate diseases. In future, Malaysian government may have a plan to implement dispensing policy under the National Medicine Policy (Chong, *et al.*, 2010). As a result, the role of pharmacist will be increased as the sole medicines dispensers.

According to Bahari and Ling (2010), there is a high competition among community pharmacies in Malaysia. In addition to compete with general practitioner clinics, pharmacists required to strive against other retailers like Chinese medical practices and traditional medical practices, in order to win the consumers. So understand the factors contributing consumers' satisfaction in community pharmacy may improve their need and expectation.

## **1.2 Overview of Community Pharmacies**

For pharmaceutical sector, it remains as an important contribution in Malaysia economy. The total expenditure of pharmaceutical industry is RM4.2 billion in 2009 (Malaysia's pharmaceutical industry reputable: Report, 2010) and it is expected to achieve RM6.4 billion in 2013 (Chua *et al.*, 2010). These figures show that there is



a potential growth of pharmaceutical industry development in Malaysia. Community pharmacies are one of the key players in this contribution as well. The quality of pharmacy services may become key success of community pharmacies. Hence, it will be crucial to recognize the factors that contributing to consumer satisfaction in community pharmacies in order for the long-term growth.

Community pharmacies may serve as a healthcare access and provision in community setting (Schommer *et al.*, 2006). In community pharmacies, pharmacists play an important role to dispense medicines, provide patient information, counselling and pharmaceutical care services (Worley, Schommer, Hadsall, Ranelli, Stratton and Uden, 2007). The role of pharmacist has been changed from traditional medicine purchase to service- or patient-oriented practice (Roberts, Benrimoj, Chen, Williams, Hopp and Aslani, 2005). That means pharmacist will provide individualized patient's services in order to fulfil their needs and satisfaction.

The term of consumer satisfaction is emerged from the alternative method of studying quality of care in community setting, such as patients have good compliance to medicines and continue to use the healthcare services (Bahari and Ling, 2010; Oparah and Kikanme, 2006). In Japan, patient satisfaction has become an indicator of evaluating the quality of medical care either from the standpoint of medical professional provider or individual patient as well (Kamei, Teshima, Fukushima and Nakamura, 2001). The importance of having high level of satisfaction will help to minimize poor compliance toward medicines and defaulted treatment. Thus, it is essentially important to evaluate and monitor patient' perceptions, needs and concerns in order to improve the healthcare delivery systems (Panvelkar, Saini and Armour, 2009).

In the business perspective, consumer satisfaction is strongly correlated with the profitability, and consumer retention and loyalty (Bahari and Ling, 2010; Hu, Chiu and Cheng, 2010; Jayaprakash, Rajan and Shivam, 2009; Villako and

Raal, 2007; Oparah and Kikanme, 2006). Satisfaction is defined as total experience on purchase and consumption of a product and service, and overall appraisal in a particular product and service that accumulated over the time period (Hu *et al.*, 2010). Consumer satisfaction may influence the consumer behaviour by continuing to use that pharmacy services and less likely to take legal action against pharmacists (Jayaprakash *et al.*, 2009). Therefore, consumer satisfaction has become a goal of the pharmacy business (Bahari and Ling, 2010). Besides that, by understanding the correlation of consumer satisfaction with their interest and expectation, it may help the pharmacist to develop strategies to service improvement and customize the dimension of pharmacy services fulfil the consumer's needs and wants (Oparah and Kikanme, 2006).

Consumer satisfaction is the key issue of improving quality of care in community setting. Meanwhile, researches had found that consumer satisfaction not only contributes to consumer retention and loyalty but also links to increasing of profit return (Hallowell, 1996). In other meaning, understand the consumer's preferences and expectations may help to assist to improve quality of healthcare services and subsequently increase the revenue and profit of the business in long run. Therefore, the primary goal of this study is to analyse the correlation of dimension of pharmacy services with consumer satisfaction in the community pharmacies. This will contribute to fill the research gap in literatures that study on pharmaceutical sectors.

### **1.3 Rationale of Study / Identification of problem**

In developed countries, the demand for better medical services is increasing due to development of medical science and technology, increase of aging population and income status (Hu *et al.*, 2010). In Malaysia, similar demand has been observed as the yearly pharmaceutical expenditure was increased about 8-10% from year 2007 to 2009 (Malaysia's pharmaceutical industry reputable: Report, 2010).

The roles of pharmacists had been changed over the last twenty years. It had been evolved from the role of medicine dispensing to the provision of pharmaceutical care and specialised services (Panvelkar *et al.*, 2009). The pharmaceutical care and specialised services include provision of disease management, patient's knowledge assessment, medicine information, disease parameter testing, ongoing follow up and others. It also indicated that there was a shift to a service- and patient-oriented practice (Robert *et al.*, 2005). In Malaysia, 42% consumers purchased medications from community pharmacy (Chong *et al.*, 2010). Hence, understanding the changes of community pharmacy is critical to provide outstanding service. However, a study by Worley *et al.* (2007) found that pharmacist did not fully understand the patient's perception related to pharmaceutical care services. The evaluation of measuring consumer satisfaction is a relatively new activity of research in community pharmacies (Oparah and Kikanme, 2006; Bahari and Ling, 2010; Kamei *et al.*, 2001). A review literature by Panvelkar, *et al.*, (2009), also reported that there is lack of well designed research on the consumer satisfaction in community pharmacy based on theoretical framework. It requires more studies to be carried out on consumer behaviour in community pharmacies related to their satisfaction.

#### **1.4 Problem Statement**

Most of the literature on studying consumer satisfaction with community pharmacies is carried out in Western countries (Oparah and Kikanme, 2006). The study of consumer satisfaction with community pharmacies is limited in Malaysia (Bahari and Ling, 2010), there is not study has been carried out in East Malaysia likes Kota Kinabalu, Sabah. Therefore, it requires more studies to be conducted in order to provide in-depth information on the understanding of the dimension of pharmacy service with consumer satisfaction.

According to Panvelkar *et al.*, (2009), there is lack of well designed research on the consumer satisfaction in community pharmacies that using theoretical framework. The concept of consumer satisfaction in community pharmacies is not well explained and constructed by theory (Panvelkar *et al.*, 2009). Thus, it provides

a research gap in using theoretical framework to explain the concept of consumer satisfaction in community pharmacies. This may help to understand the consumer behaviour (consumer satisfaction) based on underlying theory and concepts.

Consumer satisfaction is one of the measurements of quality of care in community setting (Bahari and Ling, 2010; Oparah and Kikanme, 2006). It may explain whether the consumer's expectation is met and aligned with value of pharmaceutical services provided (Jayaprakash *et al.*, 2009). In patient perspective, high level of satisfaction may lead to good compliance to medicines and continue to use the healthcare services (Bahari and Ling, 2010; Panvelkar *et al.*, 2009; Jayaprakash *et al.*, 2009). On the other hand, unsatisfied patient may not adhere to schedule of follow ups and take their medicine as prescribed. This indirectly may worsen the patient's health problem and increase the national medical care expenditures.

## **1.5 Research Question**

The research questions of this study are used to examine:

- a) What are the key factors that contribute to consumer satisfaction in community pharmacies?
- b) What is the relationship between dimension of pharmacy services (attitude of pharmacy/pharmacist, availability of over-the-counter (OTC) drugs and a variety of products, pricing, convenient hours, and convenient location) and consumer satisfaction in community pharmacies?
- c) What is the moderating effect of demographic factors (age, employment status and income status) on the relationship between the dimension of pharmacy services and consumer satisfaction?

## **1.6 Research Objectives**

In order to solve the problem as underlined above, the research objectives are further explained as below:

- a) To identify the key factors influencing consumer satisfaction with community pharmacies.
- b) To examine the relationship between dimension of pharmacy services (attitude of pharmacy/pharmacist, availability of OTC drugs and a variety of products, pricing, convenient hours, and convenient location) and consumer satisfaction in community pharmacies.
- c) To investigate the moderating effect (age, employment status, income status) on the relationship between dimension of pharmacy services and consumer satisfaction with community pharmacies.

### **1.7 Scope of Study**

This is a cross-sectional study that using quantitative survey approach to investigate the relationship between dimension of pharmacy services and consumer satisfaction in community pharmacies. The sample of this study consists of consumers in community pharmacies at Kota Kinabalu, Sabah. Six community pharmacies are selected as the location of collecting data. Non-probability sampling technique is used for selecting the location of community pharmacies due to unable to obtain the list or sampling frame of community pharmacies in Kota Kinabalu, Sabah. The participation is strictly voluntary and informed consent is obtained prior to this study. Participants are randomly selected by choosing those who came in the community pharmacies in even number. Self-administered questionnaires are used to collect data. In this study, consumer satisfaction is the dependent variable whereas there are five dimension of pharmacy services of independent variables which include attitude of pharmacy/pharmacist, availability of OTC drugs and a variety of products, pricing, convenient hours, and convenient location. Age, employment status and income status may serve as moderators in this study.

### **1.8 Significance of Study**

The significance of this study is to improve consumer satisfaction in community pharmacies because pharmacists did not understand patients' perceptions of pharmaceutical services (Worley *et al.*, 2007). Consumer satisfaction is a key

success factor in service sectors like community pharmacies. It has become goal of the business because it strongly influence the profitability of the business and improve consumer retention and loyalty (Bahari and Ling, 2010; Hu *et al.*, 2010; Jayaprakash *et al.*, 2009; Villako and Raal, 2007; Oparah and Kikanme, 2006). By understanding and identifying of the consumers' interest and expectation, it may provide steps for improvement and help to develop or customize the implementation strategy in order to fulfil the customer need and expectation. This may link to improve the revenue and profit in long run.

The significance of this study is attempted to understand the key factors influence the consumer satisfaction in community pharmacies. It provides valuable information on consumer satisfaction in community pharmacies. This may help to understand on how the consumer behaviour correlates to consumer satisfaction in community pharmacies. So the concept of consumer satisfaction in community pharmacies will be studied in-depth.

On the other hand, this analysed data may help to improve quality of healthcare if the service provided by the community pharmacy able to meet consumer needs and wants (Oparah and Kikanme, 2006). This may lower the rate of changing healthcare service and reduce the chances of non-compliance to medicines. By understanding patient' perceptions, needs and expectations, this may provide insight information to improve patient's quality of life and reduce the national medical care expenditure (Panvelkar *et al.*, 2009).

By correlating the dimension of pharmacy services with consumer satisfaction, this may help to identify the consumer's needs and expectations. This is essentially important, particularly for pharmacist to improve the healthcare delivery services and formulate the business strategies to fulfil the customer's needs and expectations. Proper adjustments in the business strategy may help to maintain the retention and loyalty of the consumer and improve sustainability of the business (Jayaprakash *et al.*, 2009; Oparah and Kikanme, 2006). Besides that,

consumers with higher satisfaction level are less likely to take legal action against pharmacists (Jayaprakash *et al.*, 2009).

## **1.9 Definitions of Key Terms in Study**

### **Community Pharmacies**

Community pharmacies serve as a healthcare access and provision in community setting (Schommer *et al.*, 2006). In community pharmacies, pharmacists play an important role to dispense medicines, provide patient information, counselling and pharmaceutical care services (Worley *et al.*, 2007).

### **Consumer Satisfaction**

Consumer satisfaction is an integral feeling result from total experience on purchase and consumption of a product and service and overall appraisal in a particular product and service accumulated over time period (Hu *et al.*, 2010). It is one of the important factors that influencing consumer behaviour (Calder and Burnkrant, 1977). Satisfied consumer may increase the frequency of repeated purchase behaviour (Bahari and Ling, 2010; Hu *et al.*, 2010).

### **Attitude of Pharmacy/Pharmacist**

According to Bahari and Ling (2010), attitude of pharmacy/pharmacist is referred to the evaluation of general attitude of pharmacist towards the consumer, and the competency and ability to provide professional information and advices. The criteria of good attitude of pharmacy/pharmacist include detailed explanation on the medicine, listened to what consumer say, pharmacists and the staffs are polite and have good attitude, the pharmacy is reliable and information of routine health maintenance is provided.

## **Over-The-Counter (OTC) Drugs**

The term of over-the-counter (OTC) drugs is referred to the drugs that can be purchased by patients or consumers without a physician's prescription (Simoens *et al.*, 2009). Normally, it will locate on the shelves of the stores in the community pharmacies. The examples of OTC drugs include Panadol<sup>®</sup>, Ubat Batuk Cap Ibu dan Anak<sup>®</sup>, vitamin and supplement.

## **Available of OTC Drugs and a Variety of Products**

Available of OTC drugs and a variety of products is explained as a wide choice of OTC drugs and products to be available in the community pharmacy. This may help consumers to save their time for travelling around to look for the products needed.

## **Pricing**

Pricing is referred to the price of the medicines and OTC products. In Malaysia, the price of medicines is not controlled by government (Chong *et al.*, 2010). Therefore, free market is existed for pharmaceutical products and the price of the medicine is determined by retailers and market forces (Bahari and Ling, 2010, Chong *et al.*, 2010).

## **Convenient Hours**

Convenient hours is explained as the extent of waiting time to purchase the medicines and OTC drugs, the business hour of pharmacies when comparing to consumer's convenient time and the availability of pharmacist in the community pharmacies (Bahari and Ling, 2010).

## **Convenient Location**

Convenient location is concerned about the distance between the pharmacy and the consumer's house, working place, hospital, public transport station and the



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