

MUSLIM CONSUMERS' PURCHASE INTENTION
TOWARDS OTC MEDICINE IN MALAYSIA: AN
EMPIRICAL INVESTIGATION FROM ISLAMIC
PERSPECTIVE

BY

SHAFINAZ BINTI ALI JINNAH

A thesis submitted in fulfilment of the requirement for the
degree of Doctor of Philosophy

International Institute for Halal Research and Training
International Islamic University Malaysia

SEPTEMBER 2022

ABSTRACT

Medicines are changing globally due to the frequent launching of new and generic medicines which brings about the accessibility of different kinds of medicines for customers in pharmacies. Among the different kinds of medicines, the Over-the-Counter (OTC) medicines market is always under investigation due to its nature of self-medication. The purpose of self-medication comes from consumer's decision-making. Thus, OTC medicine usage and purchase behaviour could be an integrative part of global healthcare frameworks and priorities. Hence, the self-medication phenomenon is critical to understand, and it should be subjected to strict regulatory control for the betterment of the Ummah. There is a continuous argument building up among the growing number of Muslim consumers around the world about taking a possibly Halal medication. Therefore, the main objective of this study is to determine Muslim consumers' purchase intention toward OTC medicine from an Islamic perspective. The study incorporates the extended model of Theory of Planned Behaviour and *Maqasid al-Shari'ah* approach to effectively measure the key psychological factors like attitude, subjective norm, perceived behavioral control, perceived risk, and religious satisfaction in Muslim consumers as the determinants of the OTC medicine purchase decision. A non-probabilistic convenience sampling technique has been applied to choose 308 Muslim customers of pharmacies from the metropolitan territory of Kuala Lumpur and Selangor states in Malaysia. Exploratory factor analysis and structural equation modelling techniques have been used to analyze the data. The results revealed that customers' attitude, subjective norm, and perceived behavioral control toward OTC medicine were of very supportive significance, whereas the perceived risk was not significant. The outcome also revealed that customers' religious satisfaction significantly moderates the purchasing decision of OTC medicines. Based on the results, specific guidelines are recommended at the end of this thesis for OTC medicine manufacturers, sales outlets, regulators, and Muslim consumers.

خلاصة البحث

تتغير الأدوية على مستوى العالم بسبب تدشين الأدوية الجديدة والعامّة التي توفر إمكانية الحصول على أنواع مختلفة من الأدوية للعملاء في الصيدليات. ومن بين أنواع للمختلفة الأدوية يخضع سوق الأدوية التي تحتاج إلى وصفة طبية (OTC) للتحقيق دائماً بسبب طبيعة العلاج الذاتي. الغرض من العلاج الذاتي يأتي من اتخاذ المستهلك للقرارات. وبالتالي، يمكن أن يكون استخدام أدوية OTC وسلوك لشرائها جزءاً متكاملًا من أطر وأولويات الصحة العالمية. وبالتالي، فإن ظاهرة التطبيب الذاتي أمر بالغ الأهمية لفهمه، ويجب أن يخضع لسيطرة تنظيمية صارمة لتحسين الأمة. هناك جدل مستمرة بين العدد المتزايد من المستهلكين المسلمين في جميع أنحاء العالم حول تناول للأدواء الحلال. لذلك، فإن الهدف الرئيسي من هذه الدراسة هو تحديد نية شراء المستهلكين المسلمين أدوية OTC من منظور إسلامي. تشمل الدراسة على النموذج الموسع لنظرية السلوك المخطط له ونهج مقاصد الشريعة لقياس العوامل النفسية الرئيسية مثل الموقف، والمعايير الذاتية، والسيطرة السلوكية المتصورة، والمخاطر المتصورة، والرضا الديني لدى المستهلكين المسلمين كمحددات لقرار شراء أدوية. تم تطبيق تقنية أخذ عينات ملائم غير احتمالي لاختيار 308 من عملاء الصيدليات من أراضي العاصمة في ولايات كوالا لمبور وسيلانجور في ماليزيا. تم استخدام تحليل العوامل الاستكشافية وتقنيات نمذجة المعادلة الهيكلية لتحليل البيانات. كشفت النتائج أن موقف العملاء، والمعايير الذاتية والتحكم السلوكي المتصور تجاه أدوية OTC كانت ذات أهمية داعمة للغاية، في حين أن المخاطر المتصورة لم تكن كبيرة. وكشفت النتيجة أيضاً أن الرضا الديني للعملاء يعدّل بشكل كبير قرار الشراء لأدوية OTC. استناداً إلى النتائج، يوصي بإرشادات محددة في نهاية هذه الأطروحة لمصنعي أدوية OTC ومنافذه والمنظمين والمستهلكين المسلمين.

APPROVAL PAGE

The thesis of Shafinaz Binti Ali Jinnah has been approved by the following:

Prof. Dr. Ahasanul Haque
Supervisor

Asst. Prof. Dr. Mohammad Aizat Jamaludin
Co-Supervisor

Assoc. Prof. Dr. Betania Kartika
Internal Examiner

Prof. Dr. AKM Golam Rabbani Mondal
External Examiner

Prof. Dr. Amir Akramin Shafie
Chairman

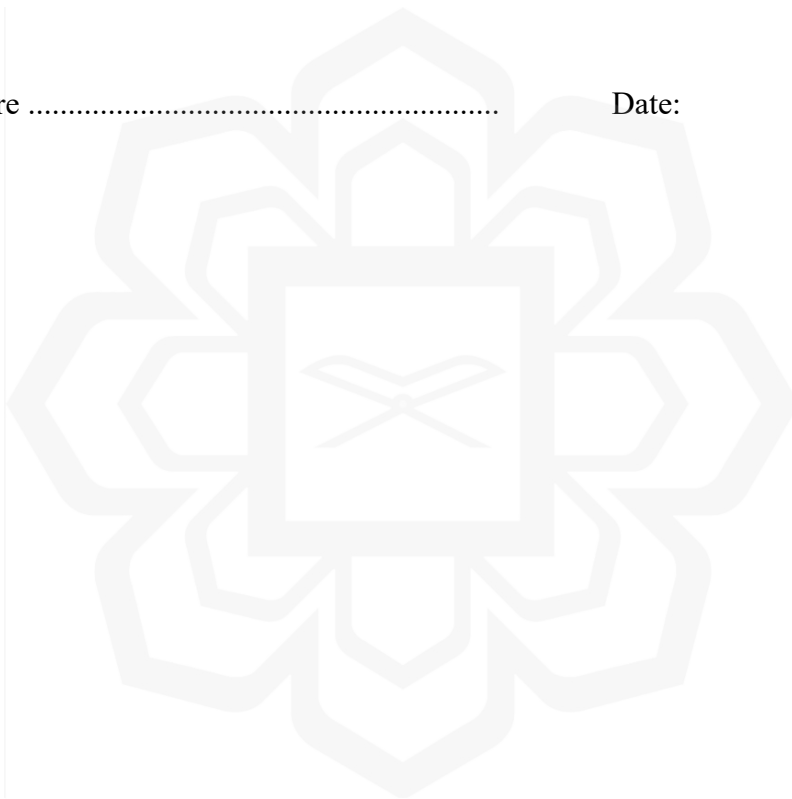
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I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Shafinaz Binti Ali Jinnah

Signature

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Date

ACKNOWLEDGEMENTS

First, I would like to express my deep and heartfelt grateful to Allah SWT for materializing my vision to obtain this PhD in Halal Industry.

I am truthfully grateful and wish to express my deep respect to my husband, Dr. Syed Ibrahim, for his supports, especially in giving me this opportunity to achieve my goal in completing this PhD program. Special thanks also to my childrens Syed Imran, Syarifah Balqis and Syed Ikhwan for all the support and always been always there for me.

My sincere and intense gratification to my supervisory committee, Professor Dr. A.K.M Ahasanul Haque, Asst. Prof. Dr. Mohammad Aizat Jamaludin and Assoc. Prof Dr Betania Kartika whose contributions has raised the quality of this thesis. Their willingness to always guide me had given me the enthusiasm to perfect my thesis to the best of my effort. Their patience and guidance have increased my wisdom in this research. I am extremely grateful to the approach and supervision that they have rendered to me; hence, I owe them high degree of appreciation. It was a great honour to finish my thesis under their supervision.

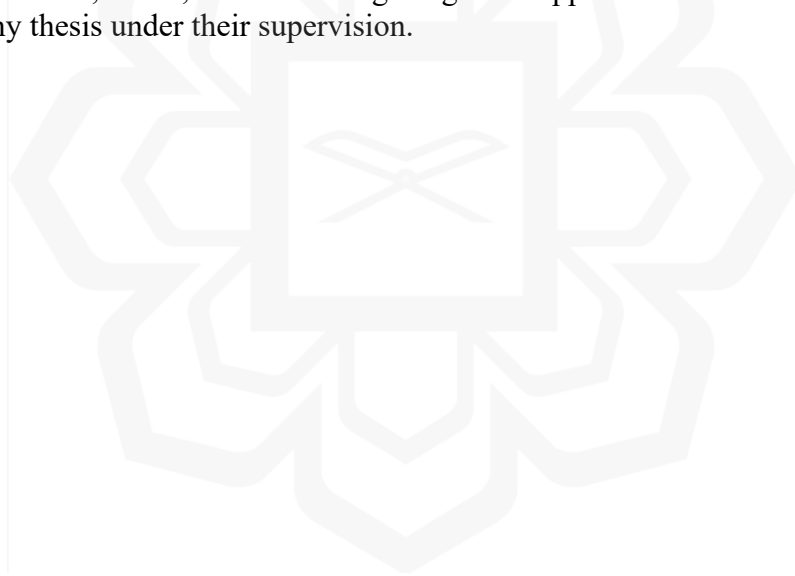


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LIST OF ABBREVIATIONS

Average Shared Squared Variance (ASV)
Average Variance Extracted (AVE)
Comparative Fit Index (CFI)
Composite Reliability (CR)
Confirmatory factor analysis (CFA)
Construct Reliability (CR)
Consumer Healthcare Products Association (CHPA)
Department of Health (DOH)
Drug Control Authority (DCA)
European Parliament Resolution (EPR)
Exploratory Factor Analysis (EFA)
Jabatan Agama Islam Negeri (JAIN)
Jabatan Kemajuan Islam Malaysia (JAKIM)
Kaiser-Meyer-Olkin (KMO)
Malaysia National Health Account (MNHA)
Maximum Shared Squared Variance (MSV)
Ministry of Health (MOH)
National Council on Patient Information and Education (NCPIE)
Over the Counter (OTC)
Public Health England (PHE)
Root Mean Square Error of Approximation (RMSEA)
Peace Be Upon Him (*Sallahu 'alaihi wassalam* PBUH)
Subhanahu wa ta'ala SWT
Summary of Product Characteristics (SPC)
Technology Acceptance Model (TAM)
Theory of Planned Behaviour (TPB)
Theory of Reasoned Action (TRA)
World Health Organization (WHO)

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

During the Middle Ages, Muslims achieved significant advances in medical research. According to Douglas Guthrie, in the book “A History of Medicine” published in 1945, Muslims were the major contributors in the treatment of a disease headed by the Prophet Muhammad PBUH. The Prophet Muhammad’s PBUH customs (*sunnah*) were rich in advice, and he recommended on how to treat any disease, with a focus on cleanliness, sanitation, and the use of medications during illness. The Prophet Muhammad’s PBUH actions and words about infection, treatment, nutrition, and hygiene are considered as Prophetic medicines. It differs from Islamic medicine in that the latter is a broader categorization that encompasses a variety of therapeutic procedures developed in Muslim nations’ ancient human advances that influenced Ancient Islamic Medical sciences.

Narrated Ibn `Abbas: The Prophet PBUH said: “*There are two blessings that many people are deceived into losing: health and free time.*” (Sahih al-Bukhari, Hadith No: 6412). It is clear from this hadith that health is a gift from Allah SWT and adopting remedial measures for the improvement of one’s health is one of the responsibilities of Muslims.

Many Prophetic hadiths in Bukhari, Muslim, and others indicate that people were used to coming to the Prophet Muhammad PBUH on a regular basis and informing him about their illnesses. He would advise them to seek medical help first, and then to pray to Allah SWT to heal them. On a few occasions, he would personally suggest specific medications. For example, if his followers experienced a lack of desire to eat,

he would frequently advise them to take *Talbina*, a grain-based planning. He used to recommend using Senna, an herb, to help with clogs. Some of these Prophetic medicines are still accessible and named as over-the-counter (OTC) medications at pharmacies. The guideline of Prophetic medication entails a representational framework in the explanation of the Islamic way of life as a Muslim consumer of medicines, which is composed of a particular arrangement of links to science, medication, consumer behaviour, and Islam.

Consumer behaviour is influenced by a variety of variables such as cultural, social, personal, and psychological considerations (Pujari NM et al., 2016). Because the Muslim consumer market is expanding rapidly in today's difficult environment, key psychological variables such as attitude, perception, and belief are needed to be examined. In 2010, Muslims accounted for more than 1.6 billion people, or 23.4 percent of the global population, with a projected 35 percent increase (2.2 billion) by 2030 (Elasrag, 2016; Amat, As'hari, and Sundram, 2014). Muslim consumers dominate several nations in South Asia, Southeast Asia, the Middle East, and Northern Africa. When coping with everyday issues, a Muslim examines the teachings of Islam as a religion. As a result, it may be stated that Islam and its teachings have a direct impact on a Muslim's behaviour. Islam has provided its teachings through *Maqasid al-Shari'ah* (the objectives of Islamic law) both for actions and for mannerisms (Wani, 2013). Consequently, when a Muslim engages in a buying transaction, the behaviour is shown. The individual attempts to connect Islam's teachings with his or her buying issues, and then purchases items in line with the teachings. Therefore, religious guidance is needed to achieve some benefit (*Maslahah*) or prevent some harm (*Mafsadah*).

Self-care is a key component of consumer behaviour in the use of medication. Self-care refers to the activity's individuals do for themselves in order to improve and

maintain their well-being, as well as to prevent and manage illness (WHO, 1998). Self-prescription is an important aspect of self-care. Self-prescription refers to the treatment of common medical problems with medicines that are specifically designed and labelled for use without medical supervision and are approved as safe and convincing for such usage. Self-medication drugs are often referred to as over-the-counter (OTC) medicines, and they may be obtained legally without a doctor's prescription from drug shops, supermarkets, and other sources. Many illnesses are treated using over-the-counter (OTC) medications in many households, which are helpful in easing minor health issues such as headaches, colds, and aching muscles (Albarrán and Zapata, 2008).

Self-medication using over-the-counter medicines is extremely prevalent among Malaysians. This may be seen in the increase in the size of the OTC market from 2006 to 2010. In Malaysia, OTC medication sales increased by 28.3 percent, outpacing the global OTC medicine market growth of 24.8 percent (Euromonitor International, 2010). As a result, the market for over-the-counter medications is always under scrutiny. It is challenged not only by the introduction of new and generic medications, but also by changes in medication scheduling (Bond and Hannaford, 2003), which often result in the inaccessibility of medicines in pharmacies. Medicine experts and pharmacy personnel must offer professional service while recommending and selling OTC medications in order to maximize client loyalty. Understanding customer behaviour in the purchasing of these medications is a crucial step in improving such professional services (Emmerton, 2005). In today's marketing world, the consumer is seen as "The King." Manufacturers marketed everything to customers with the advent of the marketing age. But today, it is the consumer's buying choices that determine what should be produced, in what amount, and of what quality. While choosing whether or not to advertise a product, a marketer must examine a variety of variables, as customers

have varying tastes (Pujari NM et al., 2016). The job of the producer and marketer becomes more complex, and it is critical to comprehend customer behaviour. As a result, understanding customer behaviour is more hazardous in the pharmaceutical industry than it is in the health and medicine industry.

Fundamentally, Muslims must recognize that Allah SWT can heal them from any disease. Muslims must search for a solution that is not against Islamic norms, such as the use of black magic or other techniques that Allah SWT has designated as *Haram*. Materials used in medicine should also be in accordance with Islamic principles, such as being clean and free of Haram additives. “Prevention is better than cure,” as the renowned proverb goes. In medicine, understanding Halal and Haram are critical. They should be considered by all groups in order for Islamic education to be used to address wellness. It should never be assumed, however, that someone who belongs to a particular religious group is necessarily compliant with or fully observant of all that group’s beliefs and practices. Individual patients’ responses to a given clinical scenario may be affected by a variety of variables, including their religious affiliation and the strength of their religious views, such as orthodox or reformed, moderate, or fundamentalist (Abdul, 2010). Therefore, each person should be treated as an individual (patient), and those who treat them should attempt to learn about their (patients’) perspectives and preferences before beginning therapy. The problems to consider while taking medicines in people who practice Islam are discussed in the next section.

1.2 PROBLEM STATEMENT

Islam is not a set of rituals like many other religions of the world; rather it is a complete code of life. Islam as a religion means obedience to Almighty Allah’s SWT will. From

the knowledge of Prophet Muhammad PBUH, Islam does not simply mean to submit one's will to Allah SWT by saying it. Rather it should reflect in one's actions and behaviour as well. The term "Islamic Perspective" refers to a juristic-philosophical concept developed by the later generations of the classical jurists, who attempted to formulate the goals and purposes of the Islamic Law (*Maqasid al-Shari'ah*) in a comprehensive manner to aid in the process of investigating new problems and organizing previous existing rulings.

In the Islamic custom, the distinction among wellbeing and sickness are treated as balance and irregularity. Muslims generally look for the Qur'an as a main source in the midst of mental and profound trouble. While encountering actual disease, Muslims have additionally been available to the customs and restorative acts of various practices, including those of non-Muslims. But the accompanying statements from the Prophet Muhammad PBUH have confirmed to urge patients to look for appropriate medicines on schedule of ailment.

Narrated Abu Huraira: The Prophet PBUH said, "*There is no disease that Allah has created, except that He also has created its treatment.*" (Sahih al-Bukhari, Hadith No: 5678).

Narrated Sa'd: "*I suffered from an illness. The Messenger of Allah PBUH came to pay a visit to me. He put his hands between my nipples and I felt its coolness at my heart. He said: You are a man suffering from heart sickness. Go to al-Harith ibn Kaladah, brother of Thaqif. He is a man who gives medical treatment. He should take seven ajwah dates of Medina and grind them with their kernels, and then put them into your mouth.*" (Sunan Abi Dawud, Hadith No: 3875)

Muslims follow treatment decision making such a way that may influence positively or negatively with medicines. Muslims abstain from eating pork or drinking liquor and are banished from taking medications that contain liquor or pork side-effects except if they are life-saving medications and no substitute is accessible. For the most part during a period of need, Muslims observe the overall standard that need direct exemption. Porcine heparin, for instance, contains Gelatine from pork items, and is the lone heparin all around utilized. Contemporary Muslims' way to deal with medical services is still emphatically dependent on deterrent measures. As a rule, even though Muslim patients look for a therapeutic interaction through careful or clinical methods, they look to their strict and social legacy to address their otherworldly social requirements. Precaution medical services procedures in Muslim experience incorporate individual cleanliness, halal ingredients for the evasion of treatment decision making, especially for the medicines if consumed. Tahir Ahmad Wani (2013) studied different consumption behaviour of an ideal Muslim and suggested to study further on it. Therefore, in this study, Muslim consumer's buying behaviour regarding OTC medicines consumption from Islamic perspective has been focused as taking corrective actions for the betterment of health is one of the necessities for Muslims to conduct.

There is no doubt that OTC medicines has proven to be effective in preventing and curing many illnesses. Not only that, practicing of OTC medicine was accepted by all people some decades ago and since been successful in prolonging life of many patients. However, OTC medicines rely in issuance of synthetic medication that could cause negative side effects to the patients. In some cases, the results from taking certain medication have side effect that practically supersedes the advantages that one gains from using them. The use of synthetic medication additive has been a norm in the

production of OTC medicine. Different drugs produce different effects, but critically chemical based drugs can alter the functionality of the brain (Crane, 2018). Technically, the side effects caused by using OTC medication are more dangerous and harmful to people.

By the increasing availability of non-prescription medicines, patients are influenced to believe that there is a drug treatment for every illness (Chang et al., 2016). The use of OTC medicines may also bypass the diagnosis of serious illness, with increased risk of health metabolism and side effects (Mathialagan and Kaur, 2012). Self-medication should not be taken when medical aid can have been sought. Hence, there is a high potentiality for misuse of OTC medicines. According to a survey, 70% of all prescriptions are never consumed and according to consumer health information, 20% of all the new prescriptions go unfilled (Pujari NM et al., 2016). World Health Organization (WHO) reported that half of all the patients do not adhere to their prescribed therapy (Pujari NM et al., 2016). For example, patients might not be able to differentiate between a headache and tendonitis (i.e., inflammation of a tendon) and use the one type of medicine they are familiar with for treating all symptoms. While a medical doctor or pharmacist can be able to differentiate between these problems and uses different medicines that appropriately treat each type of pain.

Today, consumers are becoming more informed about OTC medicines through pharmaceutical companies, and this is leading to a more rise in self-medication. The accessibility and plenty of choices of available OTCs naturally possess risks. Potential for missed drug interactions, incorrect dosing and incomplete knowledge with self-medication are common with consumers when self-selecting and using OTC medicines (NCPIE, 2002; CHPA, 2013). Although most consumers feel confident about their own OTC skills (i.e., using it appropriately and knowing how to get the right information),

it has been suggested that most consumers do not treat OTCs with the same level of care as prescription medicines and often overestimate their own OTC skills, which may cause health risks (Bower, Landreth and Taylor, 2013; Brabers et al., 2013). Additionally, there is conflicting evidence over whether consumers can even appropriately self-diagnose and self-treat symptoms of minor illnesses through OTC medicine use (El-den and Yee, 2014; Ellis et al., 2015; Kelly, Williams and Benrimoj, 2009).

In Malaysia, self-medication is becoming more popular than before and will continue to increase with the rising healthcare costs (Mathialagan and Kaur, 2012). According to Ministry of Health, private doctors' fees will increase by 14% once the proposed fee schedule is approved by the cabinet (Zaheer, Ibrahim and Bukhari, 2005). Moreover, the pharmaceutical industry has its own interesting structure as medicine prices are generally the same in all drug stores. Therefore, they lack in price competition in comparison to stores of the daily consumer products trade. Today, there are more product options as more generic medicines launching on the market and challenging original medicines with their lower prices. So, these scenarios have influenced Malaysians to search for other types of medication particularly, OTC medicine.

In summary, this research is focused on the following issues: 1) Islamic Shari'ah guidelines for medicine usage among Muslims are lacking practices in actual usage. 2) Self-medication is becoming more popular among the Muslims who often overestimate their own OTC skills resulting increased health risks; 3) The use of OTC medicines bypassing the diagnosis of serious illness, with increased risk of health metabolism and side effects which ultimately causing a high potentiality for misuse of OTC medicines. As a result of such reasons, the identification of factors that may impact Muslim consumer's intention to purchase OTC medicine has emerged as a crucial need,

specifically in Malaysia. Hence, the focus of this research is on medicine store customers who are Muslim and their purchasing behaviour in regard to equally priced over-the-counter (OTC) medicines and the religious factor influencing it.

1.3 RESEARCH GAP

According to the review of previous research findings, there has yet to be a thorough investigation needed on the factors that may influence purchase intention of OTC medicines. Customers and consumers who spend money in the medical services sector are divided into two groups (James et al., 2009). Unlike other sector, pharmaceutical products are very specific items, and patients have grown so interested and informed that the pharmaceutical companies are increasingly referring to them as consumers. To study patient involvement in healthcare, Graffigna, Barello, and Triberti (2015) developed a consumer-centred approach. Therefore, a consumer-centred extended model based on Theory of Planned Behaviour (TPB) was proposed in this research to examine consumers' purchase intention of OTC medicines.

The Theory of Planned Behaviour (TPB) is regarded as one of the most important theories in the study of human behaviour (Lim et al., 2016; Wee et al., 2014; Ajzen, 1991). TPB was founded on the premise that human behaviour may be deliberate and planned. According to the concept, three global constructs determine a person's desire to carry out any given behaviour: attitude, subjective norm, and perceived behavioural control (Ajzen, 1991). When it comes to the intention to buy over-the-counter medication, attitudes, subjective norms, and perceived behavioural control are crucial. As a result, these variables must be considered in order to obtain a complete picture of the purpose to purchase OTC medication. However, there is a paucity of research that considers the combined effect of these factors on OTC medication

purchase intent. As a result, the present research was designed with the goal of investigating the connection between attitude, subjective norm, perceived behavioural control, and OTC medication purchase intention, especially in the Malaysian context.

Furthermore, prior studies have addressed consumer buying behaviour toward OTC medication but have not adequately focused on the connection with perceived risk. Previous academics did not look at religious contexts that might be used in today's management environment to help achieve Islam's ultimate goals. Previous academics have discussed the importance of Islamic Law in understanding economics from a religious standpoint in various works (Choudhury, 1986; Chapra, 1992, 2000; Kamali, 2008; Dusuki and Bouheraoua, 2011). These scholars, on the other hand, give a broad overview of the significance of Islamic Shari'ah to the *Ummah* without addressing its application in the modern world. Therefore, the focus of this research was to get insight into Muslim consumers' buying decision as well as the halal elements of OTC medication usage.

1.4 RESEARCH QUESTIONS

This examination targets responding to the accompanying exploration questions:

1. What effect does Muslim consumer's attitude have on purchase intention of OTC medicine?
2. What effect does Muslim consumer's subjective norm have on purchase intention of OTC medicine?
3. What effect does Muslim consumer's perceived behavioural control have on purchase intention of OTC medicine?

4. What effect does Muslim consumer's perceived risk have on purchase intention of OTC medicine?
5. What effect does Muslim consumer's purchase intention have on purchase behaviour of OTC medicine?
6. What effect does Muslim consumer's purchase intention have on purchase behaviour of OTC medicine moderated by religious satisfaction?

1.5 RESEARCH OBJECTIVES

The main objective of this research is to determine Muslim consumer's purchase intention towards OTC medicine from Islamic perspective. Specific objectives are as follows,

1. To determine the effect of Muslim consumer's attitude on purchase intention of OTC medicine.
2. To determine the effect of Muslim consumer's subjective norm on purchase intention of OTC medicine.
3. To determine the effect of Muslim consumer's perceived behavioural control on purchase intention of OTC medicine.
4. To determine the effect of Muslim consumer's perceived risk on purchase intention of OTC medicine.
5. To determine the effect of Muslim consumer's purchase intention on purchase behaviour of OTC medicine.
6. To determine the moderating effect of Muslim consumer's religious satisfaction between purchase intention and purchase behaviour of OTC medicine.