FACTORS INFLUENCING MUSLIMS' PURCHASE INTENTION OF HALAL-CERTIFIED OVER-THE-COUNTER (OTC) MEDICINES IN BEKASI, INDONESIA

BY

FITRY OKTAVIA FATMI

A thesis submitted in fulfilment of the requirement for the degree of Master in Halal Industry Management

International Institute for Halal Research and Training
International Islamic University Malaysia

JULY 2022

ABSTRACT

Self-medication in Indonesia has recently increased; consumers can easily purchase non-prescription drugs, and many people use over-the-counter (OTC) medicines as an alternative for self-medication. However, Muslim customers have difficulty ensuring that their OTC medicines are halal. In Indonesia, the lack of a halal logo on OTC medicines is due to the producers' lack of awareness. This may raise doubt given that approximately 95% of the pharmaceutical raw materials are imported from non-Muslim countries. Although there is growing literature on halal pharmaceuticals, unfortunately, the focus on OTC is limited. To fill this gap, factors that influence the intention to purchase halal-certified OTC medicines are investigated. This study which was conducted in Bekasi, Indonesia, examined the factors that influenced Muslim consumers' purchase intentions for halal-certified OTC medicines. About 325 Muslim consumers in Bekasi, Indonesia, participated in this study. The information was gathered using questionnaires with convenient sampling techniques. This study employs the theory of consumption value, which consists of the factors of functional value (price), functional value (quality), social value (pharmacist advice), emotional value (halal logo), conditional value, and epistemic value of respondents' intentions to purchase halal-certified OTC medicines. According to the findings of this study, three factors: functional value (quality), emotional value (halal logo), and epistemic value, have a significant relationship with the purchase intention of halal-certified OTC medicines in Bekasi, Indonesia. The results also found that Muslim customers in Bekasi have a high level of trust in pharmacists' advice. Furthermore, selected demographics such as education level and occupation type are significantly different towards the purchase intention of halal-certified OTC medicines. Significant research has been done for halal food certification, but fewer studies have been conducted on halal OTC medicine certification. More research is needed to rationalise the reasons behind the reluctancy of OTC brand owners in Indonesia to apply for halal certification and what can be done to enable more OTC products to be halal certified. Therefore, a qualitative and quantitative survey for halal-certified medicines should be performed to explore why certain brand owners of OTC medicines may not want to continue with a halal certification even though their products met the criteria and had received a registration number from Indonesia Food and Drug Administration [Badan Pengawasan Obat dan Makanan (BPOM)].

ملخص البحث

قد ازداد التطبيب الذاتي في إندونيسيا مؤخرا؛ حيث يمكن للمستهلكين شراء الأدوية التي لا تستلزم وصفة طبية بسهولة. ويستخدم كثير من الناس الأدوية التي لا تستلزم وصفة طبية (OTC) كبديل للتطبيب الذاتي. ومع ذلك، يواجه العملاء المسلمون صعوبة في التأكد من أن أدويتهم التي تُباع بدون وصفة طبية حلال. في إندونيسيا، يرجع عدم وجود شعار حلال على الأدوية التي تباع بدون وصفة طبية إلى نقص وعي المنتجين. وهذا قد يثير الشك بالنظر إلى أن ما يقرب من 95٪ من المواد الخام الصيدلانية يتم استيرادها من دول غير مسلمة. وعلى الرغم من وجود دراسات متزايدة حول المستحضرات الصيدلانية الحلال، ولكن لسوء الحظ، فإن التركيز على OTC لايزال محدودًا. لسد هذه الفجوة،تمّ التحقيق في العوامل التي تؤثر على نية شراء الأدوية الحلال المعتمدة بدون وصفة طبية. فحصت هذه الدراسة التي أُجريت في بيكاسي، إندونيسيا، العوامل التي تؤثر على نوايا المستهلكين المسلمين لشراء الأدوية الحلال المعتمدة بدون وصفة طبية. شارك حوالي 325 مستهلكاً مسلماً من بيكاسي بإندونيسيا في هذه الدراسة. تم جمع البيانات باستخدام استبيانات مع تقنيات ملائمة. تستخدم هذه الدراسة نظرية القيمة الاستهلاكية، والتي تتكون من عوامل القيمة الوظيفية (السعر)، والقيمة الوظيفية (الجودة)، والقيمة الاجتماعية (نصيحة الصيدلي)، والقيمة العاطفية (شعار الحلال)، والقيمة المشروطة، والقيمة المعرفية لنوايا المستجيبين لشراء أدوية OTC الحلال المعتمدة . وفقا لنتائج هذه الدراسة، هناك ثلاثة عوامل: القيمة الوظيفية (الجودة)، والقيمة العاطفية (شعار الحلال)، والقيمة المعرفية، أظهرت علاقة كبيرة بنية شراء الأدوية OTC الحلال المعتمدة من في بيكاسي، إندونيسيا. ووجدت النتائج أيضاً أن العملاء المسلمين في بيكاسي لديهم مستوى عالٍ من الثقة في نصيحة الصيادلة. علاوة على ذلك، تؤدي التركيبة السكانية المختارة مثل مستوى التعليم ونوع المهنة إلى اختلاف كبير من حيث نية شراء أدوية OTC الحلال المعتمدة . تم إجراء أبحاث مهمة في شهادة الأغذية الحلال، ولكن تم إجراء عدد أقل من الدراسات حول شهادة الحلال لأدوية OTC. هناك حاجة إلى مزيد من البحث لترشيد الأسباب الكامنة وراء تردد مالكي العلامات التجارية OTC في إندونيسيا في التقدم بطلب للحصول على شهادة الحلال وما يمكن القيام به لتمكين المزيد من منتجات OTC من الحصول على شهادة الحلال. لذلك، يجب إجراء مسح نوعي وكمي للأدوية الحلال المعتمدة لاستكشاف سبب عدم رغبة بعض مالكي العلامات التجارية للأدوية التي تباع بدون وصفة طبية في الاستمرار للحصول على شهادة الحلال على الرغم من أن منتجاتهم استوفت المعايير وتلقت رقم تسجيل من إدارة الغذاء والدواء [Badan Pengawasan Obat dan Makanan (BPOM)].

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion, it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a thesis for the degree of Master in Halal Industry Management.

……..
Betania Kartika Muflih
Supervisor

……..
Anis Najiha Ahmad
Co-Supervisor

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a thesis for the degree of Master in Halal Industry Management.

……..
Mohd Hafidz Mahamad Maifiah
Internal Examiner

……..
Nitty Hirawaty Kamarulzaman
External Examiner

This thesis was submitted to the International Institute for Halal Research and Training and is accepted as a fulfilment of the requirement for the degree of Master in Halal Industry Management.

……..
Yumi Zuhanis Has-Yun Hashim
Deputy Dean, Academic and
Internationalisation, INHART

This thesis was submitted to the International Institute for Halal Research and Training and is accepted as a fulfilment of the requirement for the degree of Master in Halal Industry Management.

……..
Hamzah Mohd. Salleh
Dean, INHART

DECLARATION

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.

Fitry Oktavia Fatmi

Signature ..... Date .....

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

DECLARATION OF COPYRIGHT AND AFFIRMATION OF FAIR USE OF UNPUBLISHED RESEARCH

FACTORS INFLUENCING MUSLIMS PURCHASE INTENTION OF HALAL-CERTIFIED OVER-THE-COUNTER (OTC) MEDICINES IN BEKASI, INDONESIA

I declare that the copyright holders of this thesis are jointly owned by the student and IIUM.

Copyright © 2022 Fitry Oktavia Fatmi and International Islamic University Malaysia. All rights reserved.

No part of this unpublished research may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission of the copyright holder except as provided below

1. Any material contained in or derived from this unpublished research may be used by others in their writing with due acknowledgement.

2. IIUM or its library will have the right to make and transmit copies (print or electronic) for institutional and academic purposes.

3. The IIUM library will have the right to make, store in a retrieved system and supply copies of this unpublished research if requested by other universities and research libraries.

By signing this form, I acknowledged that I have read and understand the IIUM Intellectual Property Right and Commercialization policy.

Affirmed by Fitry Oktavia Fatmi.

……..…….. ……..

Signature Date

This thesis is dedicated to my husband, children, parents, sisters, brothers, and friends who supported me in this study journey.

ACKNOWLEDGEMENTS

All praise, adoration, gratitude, salutations, appreciation, and thanks to Almighty Allah (SWT) for His infinite mercy on me. With His (SWT) grace and unfathomable guidance, I am now able to complete my thesis. This thesis, however, cannot be achieved without Allah's (SWT) blessing and guidance.

Shalawat and Allah's (SWT) best wishes for the Prophet Muhammad (PBUH) as Shariah bearer, for Islam to be believed, studied, lived, and practised by humans in everyday life. If there is a truth in this thesis, then this truth comes from Allah (SWT). However, if there are any errors or flaws in this thesis, they are my fault. Therefore, I apologise. So, criticism and suggestions are needed for future improvements.

Firstly, I would like to thank my family, my husband, and my children, for being here with me throughout this journey by providing their continuous support. My dearest thanks and gratitude go to my parents for their sacrifices to educate me to become a better human being. There are no words to describe how grateful I am to have you as my parents, and I am so sorry for being far away from you all these years. Thank you for all your prayers and support.

My heartfelt gratitude goes to my supervisor, Assoc. Prof. Dr. Betania Kartika, and my co-supervisor, Asst. Prof. Dr. Anis Najiha Ahmad, for their unwavering support in helping me complete my thesis. Their advice, guidance, and motivation helped me throughout this research. I could not have imagined having better supervisors and mentors for my thesis.

Besides my supervisors, I would like to thank my thesis committee and examiners for their insightful comments that helped me enhance and do better research.

I would also like to thank all the lecturers and faculty members who have been there and completed my studies for this Master in Halal Industry Management (MAHIM).

Finally, many thanks to the respondents who took the time to complete the survey. This study would not have been possible without their help. Thank you to all of my friends with whom I have shared my highs and lows, encouragement, and useful information.

TABLE OF CONTENTS

Abstract ..... **ii**
Abstract in Arabic ..... **iii**
Approval page ..... **iv**
Declaration ..... **v**
Acknowledgements ..... **viii**
Table of contents ..... **ix**
List of Tables ..... **xii**
List of Figures ..... **xiii**
List of Abbreviations ..... **xiv**

CHAPTER ONE: INTRODUCTION **1**
1.1 Background of Study 1
1.2 Problem Statements 4
1.3 Research Objectives 8
1.3.1 The General Objectives 8
1.3.2 The Specific Objectives 8
1.4 Research Questions 9
1.5 Significance of The Study 9
1.6 Scope of Study 10
1.7 Definition of The Term 10
1.8 Overview of Chapter 13

CHAPTER TWO: LITERATURE REVIEW **14**
2.1 Introduction 14
2.2 Halal And *Toyyib* 14
2.3 Relationship Between Halal, Hygiene, and Safety Product Consumption 16
2.4 Halal-Certified Over-The-Counter (OTC) Medicines 17
2.5 Halal Chain in Indonesia 19
2.6 Halal Medicines Chain in Indonesia 21
2.7 Authority Involved in The Halal OTC Industry in Indonesia 23
2.8 The Halal OTC Market Opportunities 25
2.9 Issues of OTC Medicines in Indonesia 27
2.10 Issues of Halal OTC Medicines 29
2.11 Purchase Intention 32
2.12 Pharmacist 33
2.13 Trust 34
2.14 Purchase Decision on OTC 34
2.15 Theory Related to OTC Purchase Intention 36
2.16 Theory of Consumption Value (TCV) 36
2.16.1 Functional Value 42
2.16.2 Price 42
2.16.3 Quality 43
2.16.4 Social Value 43
2.16.5 Emotional Value 44

2.16.6 Halal Logo/Halal Certification....44
2.16.7 Conditional Value....45
2.16.8 Epistemic Value....45
2.17 Theoretical Framework of The Study....46
2.18 Chapter Summary....47

CHAPTER THREE: RESEARCH METHODOLOGY....48
3.1 Introduction....48
3.2 Research Design....48
3.3 Population....49
3.4 Bekasi Demographic....50
3.5 Sampling....51
3.5.1 Sampling Technique....51
3.5.2 Sample Size....53
3.6 Research Instrument....53
3.6.1 Development of Questionnaires....53
3.6.1.1 Adapted Questionnaires....54
3.6.2 Questionnaires Translation....57
3.6.3 Questionnaires Distribution....57
3.7 Data Collection....59
3.7.1 Experts Review....59
3.7.2 Pre-Test....59
3.7.3 Pilot Study....60
3.7.4 Distribution of Questionnaires....61
3.8 Statistical Analysis....63
3.8.1 Data Screening....63
3.8.1.1 Missing Data....63
3.8.1.2 Outliers....64
3.8.1.3 Normality....64
3.8.1.4 Descriptive Analysis....65
3.8.1.5 Respondent's Profile....66
3.8.2 Exploratory Factor Analysis (EFA)....66
3.8.2.1 Validity....67
3.8.2.2 Reliability....67
3.9 Level of Trust....68
3.10 Multiple Regression Analysis....68
3.10.1 T-Test And One-Way Variance Analysis (ANOVA)....69
3.11 Chapter Summary....69

CHAPTER FOUR: RESULTS AND DISCUSSIONS....71
4.1 Introduction....71
4.2 Data Screening....72
4.2.1 Missing Data....72
4.2.2 Outliers....72
4.2.3 Normality....73
4.3 Descriptive Analysis Results....76
4.3.1 Profile of Respondents....77
4.4 Level of Trust....81
4.5 Descriptive Statistics....84

4.6 Exploratory Factor Analysis (EFA) 89
4.7 Reliability 101
4.8 Multiple Regression Analysis 102
4.9 T-Test and One-Way Variance Analysis (ANOVA) 110
4.9.1 Gender And Purchase Intention of Halal-Certified OTC Medicines 111
4.9.2 Anova Test Result Demographic and Purchase Intention of Halal- Certified OTC Medicines 112
4.10 Summary of Chapter 117

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS 118
5.1 Introduction 118
5.2 Summary 118
5.2.1 The Objectives of The Study 119
5.2.2 Findings 120
5.2.3 Hypothesised Summary 123
5.3 The Implication of The Research 125
5.4 Limitation of The Research 127
5.5 Suggestions for Future Research 127
5.6 Conclusion 128

REFERENCES 129

APPENDIX A : COVER LETTER QUESTIONNAIRES 148
APPENDIX B : SURVEY QUESTIONNAIRES 149
APPENDIX C : KUESIONER DALAM BAHASA INDONESIA 156

LIST OF TABLES

Table 2.1	Classification of Medicine in Indonesia	18
Table 2.2	Muslim Countries with Highest GDP (PPP) and Muslim Population	26
Table 2.3	Non-Halal Sources in Pharmaceutical Products	31
Table 2.4	Articles of Theory Consumptions Value in the Products.	38
Table 3.1	List of Items for All Constructs and Sources	54
Table 3.2	Pilot Test Reliability Result	61
Table 4.1	Normality Test Result	73
Table 4.2	Profile of Respondents	77
Table 4.3	Respondent's Access to Information to Halal-Certified OTC	79
Table 4.4	Places to Purchase Halal-certified OTC Medicines	80
Table 4.5	Percentage Level of Trust to The Pharmacist	82
Table 4.6	Descriptive Analysis Results	86
Table 4.7	KMO and Bartlett's Test	90
Table 4.8	Summary of Exploratory Factor Analysis (EFA)	93
Table 4.9	Reliability Coefficient	102
Table 4.10	The Multiple Regression Analysis Model Summary Model	102
Table 4.11	The Multiple Regression Analysis	104
Table 4.12	Hypotheses Testing Decision from Multiple Regression Analysis	105
Table 4.13	T-test: Gender towards Purchase Intention of Halal-Certified OTC Medicines	111
Table 4.14	One-way ANOVA for Demographics According to Intention	113
Table 4.15	Relationship Summary of Demographics and Purchase Intention	115
Table 5.1	Multiple Linear Regression Analysis of Purchase Intention of Halal-certified OTC Medicines (n = 325)	121
Table 5.2	Hypothesised Summary	124

LIST OF FIGURES

Figure 2.1	Halal Chain of Halal Authority, Operator, Product, and Consumer	20
Figure 2.2	Flow of Drugs Registration in Indonesia	21
Figure 2.3	Pharmaceutical Chain in Indonesia	23
Figure 2.4	Halal Law Implementation Plan in Indonesia	25
Figure 2.5	Factors that Influence the Purchase Decision on OTC	35
Figure 2.6	Conceptual Framework of the Theory Consumption Value	42
Figure 2.7	Depict of Conceptual Mode	47
Figure 3.1	Map of Bekasi, Indonesia	51

LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
EFA	Exploratory Factor Analysis
BPJPH	*Badan Penyelenggara Jaminan Produk* Halal
BPOM RI	*Badan Pengawasan Obat dan Makanan Republik Indonesia*
CCB	Consumers Choice Behavior
CPOB	*Cara Pembuatan Obat Yang Baik*
CDOB	*Cara Distribusi Obat yang Baik*
CV	Conditional Value
DepKes	Departemen Kesehatan
DNA	Deoxyribonucleic acid
EM	Emotional Value
EP	Epistemic Value
FVP	Functional Value Price
FVQ	Functional Value Quality
GHP	Good Hygiene Practise Standard Operating Procedures
GMP	Good Manufacturing Practise
HACCP	Hazard Analysis and Critical Control Point
IOP	Intention of Purchase
ISO	International Organization for Standardization
JAKIM	*Jabatan Kemajuan Islam Malaysia*
JPH	*Jaminan Produk* Halal
LPH	*Lembaga Pemeriksa* Halal
LPPOM MUI	*Lembaga Pengkajian Pangan Obat-obatan dan Kosmetika Majelis Ulama Indonesia*
MenKes	*Menteri Kesehatan*
OTC	Over-the-Counter
QA	Quality Assurance
SOP	Standard Operating Procedures
SPSS	Statistical Package for Social Sciences
SV	Social Value
TPB	Theory Plant Behaviour
TCV	Theory Consumption Value
WHO	World Health Organisation

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF STUDY

Health is one indicator that describes the level of success in one country. The primary purpose of health development is to achieve the maximal health level in society. The effort to increase health in the community must be made by policymakers, producers, and the community (DepKes, 1992).

Medicine is one of the salient parts of health services. It plays a role in prevention, diagnosis, and treatment/medication recovery. Therefore, medicine has become one of the main components of medication (Biggers, 2018). Thus, the medicine must be approved for safety, quality, and efficacy. According to Indonesian Health Ministry Regulation No 917/Menkes/Per/X/1993, over-the-counter (OTC) medicine is a medicine that might be purchased without a prescription in the market found in pharmacies and supermarkets. Halal pharmaceuticals are drug products that come from a permissible source, like animals, plants, organic or inorganic substances, and are made in a way that is in line with the rules of Islam (Tushar Saha et al., 2019a). They should be free of haram ingredients, but they should also be *toyyib*.

Nowadays, in many countries, such as the United States of America, the United Kingdom, Ireland, Indonesia, and India, people are trying to improve their health by self-medicating (Amparo, 2018; Cooper, 2013; Kamath & Supriya Lakhangaonkar, 2015; Wazaify et al., 2005). Self-medication is a person's initiative to use non-prescription medicines to improve or heal their health issues (Mumtaz et al., 2011). People are self-medicating by purchasing non-prescription drugs or OTC medicines.

Self-medication practises are widely practised in many countries. Economic, political, and cultural factors have contributed to increased self-medication worldwide, making it a major public health issue (Patil et al., 2014). The global OTC drugs market reached

USD 175.47 billion in 2019, and the value is expected to reach USD 264.46 billion by 2024 (Over The Counter Drugs Market, 2019).

The Central Agency on Statistics in Indonesia (*Badan Pusat Statistik*) published the Health Statistic Profile 2019, stating that about 71.46% of the Indonesian population practised self-medication, whereas in 2018, it was 70.74% (Statistik, 2019). According to Cekindo.com.id (2021) in the global data survey, the Indonesian pharmaceutical market will be the largest in the ASEAN region in 2021, with IDR 141.6 billion (USD 10.11 billion). The pharmaceutical industry is expected to grow at a rate of 12–13 per cent per year, with the pharmaceutical market valued at IDR 84 trillion (USD 6 billion) and expected to reach $10.11 billion by 2021, and OTC pharmaceuticals valued at IDR 48.8 trillion (USD 3.483 million) in 2018 and expected to grow at a rate of 1.3 per cent per year (the compound annual *growth* rate/CAGR 2018–2021) (Indonesia.Go.Id, 2021). OTC pharmacies generate an income per person of IDR 183,250 (USD 13.08) in comparison to the total population. As a result, it indicates that OTC medicines are widely used in Indonesia.

Furthermore, the future demand for OTC (OTC) medical products will grow optimistically in 2021. Arief (2019) states that Indonesia's broad domestic population needs lower OTC medicine prices than prescription medication. In the meantime, growth in OTC pharmaceutical sales will reach 5–10% by the end of 2019 (Arief, 2019). The Association of Pharmacy Entrepreneurs (GP Pharmacy) recorded growth of OTC medicines reaching 5–6% in the first quarter of 2019. The pharmaceutical industry started to work faster in 2019 to catch up with growth. The market especially needs to focus on non-prescription drugs or OTC medicines, including limited OTC medicines. One of the efforts is to provide halal certification for these pharmaceutical products (Wijayanto, 2019). This halal certification can provide added value and guarantees for consumers when utilising medical products.

The increasing self-medication practise has led to the rapid growth of the OTC medicine market segment. It encourages patients to be more self-sufficient in making choices regarding minor disease care, hence increasing empowerment (Patil et al., 2014). In addition, self-medication is viewed as a chance for individuals to take

responsibility and gain confidence in their ability to control their health (Hughes et al., 2000). Self-medication is a practical and fast way to heal a disease without consulting a physician, especially in remote areas. Self-medication provides benefits for healthcare systems as well, as it allows for better use of clinical skills and enhances people's access to medicine. Another advantage of self-medication is the variety of medicines available to consumers; making drugs available OTC improves patient access, allowing for faster access and cost-shifting. Lastly, the medicines available OTC shift the expense from the healthcare system to the patient.

However, the increase in the OTC market has dire implications as many consumers become victims of either illegal drug stores or counterfeit medicine in Indonesia. The issue is that due to the low prices of counterfeit medicine, the medicines are easily purchased (Away, 2017), and the eagerness of consumers for fast recovery forces them to buy fake medicine without sufficient knowledge in terms of the ingredients, side effects, and dosage of medication (Wardah, 2018).

Moreover, these issues could negatively impact society, such as misuse of medicine, inappropriate medication due to wrong self-diagnosis, and misdiagnosis causing consumers' complications (Patil et al., 2014). Another negative impact on the OTC industry is that counterfeit OTC medicines are increasing in the market. The World Health Organisation (WHO) first defined fake drugs as "…counterfeit medicines purposely labelled incorrectly regarding their identity and source […] and counterfeit products may include incorrect ingredients, exclude active pharmaceutical ingredients or quantities, and have false packaging." In 2011, the WHO proposed the terms "Substandard, Spurious, Falsely Labelled, Falsified, and Counterfeit" (SSFFC) to refer to the matter; they replaced the terms with "substandard and falsified medical products" (Rebiere et al., 2017). Additionally, the production process of these counterfeit products is not in compliance with Good Manufacturing Practises (GMP). Fake medicine might also contain toxic and harmful ingredients, which could be dangerous to consumers' health.

1.2 PROBLEM STATEMENTS

OTC medicines are medical items customers buy without a prescription (BPOM RI, 2015), such as analgesics, antacids, antiemetic, influenza, coughing, skin, and antihistamine medicines (Tanjungpura, 2020). Self-medication is rising as consumers can easily purchase OTC medicines available in pharmacies, drugstores, grocery shops, supermarkets, and retail outlets like AEON, Tiptop, and Lotus.

Another harmful impact of the increasing demand for OTC medicine in Indonesia is the availability of fake products both online and offline (*Badan POM Perang Terhadap Penyalahgunaan Obat dan Obat Ilegal*, 2017); for offline purchases, customers can buy fake products from drugstores (Wartakota, 2019); for online purchases, customers can purchase the OTC medicine on online shopping platforms such as Shopee, Tokopedia, and Bukalapak (Putri, 2016). Furthermore, an additional concern is the cases of purchasing potent drugs without a prescription in drug stores, online stores, and pharmacies that have also happened in Indonesia (Oktaviani, 2020; Putri, 2016; Putri, 2019; Resistance & Aureus, 2020; Velarosdela, 2020).

In Indonesia, there were also cases related to medicine that negatively affected consumers' religious beliefs, health, and safety. Near the end of 2017, the Indonesian Government Authority on drug and food safety, Badan Pengawasan Obat dan Makanan (BPOM), or the Indonesia Food and Drug Supervisory Agency, experienced several cases regarding OTC medicine, traditional medicine, and cosmetics. In two cases in November and December 2017, BPOM conducted post-market vigilance by randomly sampling a few OTC medicines. As a result, positive detection of one digestion medicine and one supplement product contained DNA from porcine (BPOM RI, 2019a; Camelia, 2018; Indra, 2018; Streaming, 2019). In another case, BPOM was discovered in November 2018; traditional medicine with a value estimated at IDR 22.3 billion (USD 1.4 million) contained harmful chemical ingredients, such as paracetamol and phenylbutazone sildenafil citrate. These medicines could cause kidney failure, stomach irritation, heart attacks, and liver damage. Additionally, some of these products were not registered by the Indonesian Ministry of Health (Corner, 2018).

Customers have the right to be provided with halal and *toyyib* medicine and cosmetic products in the market, as stated in the regulation, Undang-Undang No. 33 of the year 2014, Article 4: Products that enter, circulate, and are traded in the territory of Indonesia must be-certified halal (Presiden RI, 2014). The government has a role in ensuring the accessibility and availability of these halal products to Muslim customers. The government began to gradually implement Law No. 33 of 2014, which requires a halal certification for all food, beverages, cosmetics, drugs, chemical products, biological products, genetically engineered products, and consumer goods (UU RI No 33, 2014). Producers have begun to register their products to get halal certification.

The obligation to be-certified halal for all products will be implemented in stages, beginning with food, beverages, cosmetics, OTC medicines, vitamins, and used goods, with registration beginning on 17 October 2019. According to the mandate of Government Regulation (PP) Article 141 Number 39 of 2021 concerning implementation in the field of halal product assurance, OTC medicines must apply for a halal certificate beginning on 17 October 2021 and ending on 17 October 2021 (Prakoso, 2021). The pharmaceutical manufacturers have begun to register their products for halal certification; the samples of halal-certified OTC brands already in Indonesia's market are decolgen, neozep, imboost, panadol, antimo, decolsyn syrup, paramex, and mylanta tablet.

Currently, to register a halal certification must be through the Indonesian halal authority known as *Badan Pemeriksa Jaminan Produk* Halal (BPJPH) or the Halal Product Guarantee Inspection Agency overseen by the Ministry of Religion; the BPJPH will be assisted by another organisation, namely *Lembaga Pemeriksa* Halal (LPH) or the Halal Inspection Agency; then the Indonesian *Ulama* Council issues a halal *fatwa* based on the result of the LPH audit; and finally, BPJPH issues a halal certificate.

OTC medicines must first be officially registered with BPOM, after which the producer will apply to BPJPH for halal certification. Following halal certification, halal OTC medicine is distributed following BPOM regulations using the Good Drug Distribution Method, also known as *Cara Distribusi Obat yang Baik* (CDOB). For OTC medicine, the process begins at the factory and progresses to large pharmaceutical

companies, which then distribute halal OTC medicine to pharmacies, hospitals, clinics, and drug stores.

Unfortunately, the expansion of halal certification for the pharmaceutical industry is still lagging. Katadata (2021) stated that the number of halal-certified medicines and vaccines is approximately 2,586 products; this figure is very low; namely, 0.5 per cent of all halal-certified products, totalling 575,560 products (LPPOM MUI, 2021) and LPPOM MUI stated that only 20–30 pharmaceutical companies out of 150 producers, or approximately 20% of the national pharmaceutical industry, have halal certificates for their products (Wulandari, 2019). Ayu (2019) stated that the low number of halal logos on the products is because of the producers' lack of halal awareness. The producers are not eager to apply for a halal certificate because of the complicated procedures involved in the halal certification process. Additionally, there is no demand from Indonesian customers, who still do not know the importance of the halal logo on pharmaceutical products. The development of halal-certified OTC medications is critical, yet little study has been performed on this issue.

Another reason for the small number of cosmetics and pharmaceutical companies-certified halal by *Majelis Ulama Indonesia* (MUI) can be caused by companies not meeting the MUI halal certification requirements, especially in ingredients (Katadata, 2021). Halal products must use materials that comply with the criteria, referring to the MUI *fatwa* and Halal Assurance System (HAS) 23000, derived from the MUI *fatwa* (Lutfika, 2020).

Warto A.S. (2020) states that Indonesia is dependent on imported pharmaceutical ingredients from non-Muslim countries, such as China, Canada, the United States of America, India, Japan, several European countries, and others. Around 95% of the complete materials needed to produce synthetic drugs are the total imports of pharmaceutical substances from these countries. As it is known, the halal ingredients of these imported medicines are questionable. This factor is what makes drug certification in Indonesia still low.

The absence of halal certification on OTC medicines may also cause Muslim consumers to feel insecure about consuming the products (Rahayu, 2020). Many customers become victims when purchasing OTC medicines due to the limited halal options for OTC medicines and the widespread distribution of counterfeit medications. All Muslims are obliged to consume halal and *toyyib* products. Without a halal certificate and logo, consumers must check the ingredients by themselves to ensure no haram substances or contents are in OTC medicine to their knowledge. Therefore, the halal logo and certificate are the best tools to facilitate consumers in choosing halal and *toyyib* OTC medicine (Rahayu, 2020).

Additionally, customers may consider various factors to evaluate the alternative medicines available. Understanding these factors could help market halal and *toyyib* OTC medicines. Therefore, the author of this study wants to learn what factors influence Muslim customers' purchase intentions for halal OTC medicines. This study focuses on demography in Bekasi, Indonesia. Age, gender, income, education, average monthly salary, job status, and occupation become the demographics that would like to compare with the purchase intention of halal-certified OTC medicines.

A few factors influence consumers' decision to choose OTC medicine (Feier et al., 2017; Lodorfos et al., 2006). The factors influencing OTC medicine purchase intentions include price, quality, social value (such as friends' advice, doctors' recommendations, pharmacists' advice, and testimonials from users), conditional value, emotional value, and epistemic value.

As a pharmacist has an important influence on consumers' purchase decisions, in this study, the author wants to learn the trust level of Muslim consumers related to the purchase intention of halal-certified OTC medicines. As stated in Permenkes RI No 73 (2016), pharmacists in Indonesia are professional healthcare practitioners who are pharmacy graduates and have taken the oath to be pharmacists. Some of their responsibilities are to counsel, identify drug-related problems, dispense medicines, and monitor therapy and its side effects. These roles are significant to service consumers when purchasing OTC medicines. Unfortunately, these roles are not run efficiently and smoothly (Devi, 2018; Moko, 2018). One of the salient issues is that almost 50% of

pharmacists are not on the site when they are on duty. The absence of pharmacists in the drug stores without knowledge of or background in halal medicines becomes another issue for consumers receiving the proper drugs and could cause less trust in the pharmacists (Wardah, 2018).

The researchers in Malaysia, Indonesia, the United Kingdom, India, Singapore, Thailand, Turkey, Bangladesh, Iran, Saudi Arabia, China, and Spain are also interested in studying the purchase intention of halal products, which is the main focus of the studies. These were halal food, halal meat, halal cosmetics, and halal finance (Fatmi et al., 2020). While Fatmi et al. (2020) also stated that based on Scopus data, finding studies written in the last ten years on the purchase intention of halal-certified medicines is still hard to find, only Bukhari et al. (2020) studied halal vaccination purchase intention in Malaysia and Pakistan. In Indonesia, there are several concerns with OTC medicines.

1.3 RESEARCH OBJECTIVES

This research comprises general and specific objectives.

1.3.1 The General Objectives

OTC medicines are currently in high demand from Muslim consumers in Indonesia. The general objective is to explore the factors influencing Muslim consumers' purchase intention toward halal-certified OTC medicines in Bekasi, Indonesia.

1.3.2 The Specific Objectives

The following are the specific objectives of this study:

1. To describe the trust level between pharmacists' advice and Muslim consumers' purchase intention of halal-certified OTC medicines.
2. To identify the influence factors toward Muslims' purchase intention of halal-certified OTC medicines.

3. To compare differences in intention to purchase halal-certified OTC medicine with Muslim consumer demographics in Bekasi, Indonesia.

1.4 RESEARCH QUESTIONS

Three research questions, according to the background of the study and problem statement, are listed below:

1. Is there any trust between pharmacists' advice and Muslim consumers' 'purchase intention of halal-certified OTC medicines?
2. What factors influence Muslims' purchase intention of halal-certified OTC medicine in Bekasi, Indonesia?
3. Are there any differences between Muslim consumers' demographics and their intention to purchase halal-certified OTC medicine?

1.5 SIGNIFICANCE OF THE STUDY

This study will also add to the Theory of Consumption Value (TCV) and apply it to Muslim consumers, a new environment, and halal-certified OTC medications. The findings might contribute to a better understanding of Muslim consumers' intentions in utilising halal-certified OTC medicines and their complicated connections with the affected factors: functional value, social value, conditional value, epistemic value, and emotional value.

By identifying the factors that influence the purchase intention of halal-certified OTC medicines, multiple recommendations can be proposed to the stakeholders such as patients, pharmacists, pharmaceutical companies, and MUI. The Indonesian government can target specific factors to educate further and build suitable government programs. Moreover, the anticipated findings of this research may indirectly improve Muslim awareness in the selection of halal-certified OTC medicine, particularly in Indonesia.

1.6 SCOPE OF STUDY

This study covers Muslim consumers' purchase intentions for halal-certified OTC medicine in Bekasi, Indonesia. Non-Muslim consumers are not involved in this study. There is increasing concern that counterfeit OTC medicine is a disadvantage for Muslim consumers. The salient factors must be considered when buying halal-certified OTC medicine. The scope of this study focuses only on halal-certified OTC medicines. The Theoretical Framework of Consumption Value is preferred to structure the proposed model for this study's context due to its suitability.

1.7 DEFINITION OF THE TERM

The following represents the definition of the terms used in this study:

Conditional value: Conditional value is the perceived utility obtained from an option due to a particular condition or a sequence of events the decision-maker faces (Sheth et al., 1991).

Demographic: The study of a population based on factors such as age, race, and gender. Demographic data is a statistical representation of socioeconomic information such as employment, education, income, marriage rates, birth rates, and death rates. (Hayes, 2021).

Efficacy: Efficacy is the ability of a drug to achieve the desired effect (Dictionary, 2012a).

Emotional value: Emotional value is perceived utility gained from the ability of an option to arouse feelings or affective states (Sheth et al., 1991).

Epistemic value: Epistemic value is the perceived utility derived from an option's capacity to create enthusiasm, provide novelty, or meet a desire for knowledge (Sheth et al., 1991).