

# Understanding Halal pharmaceuticals: Views from outpatients in a Malaysian state hospital

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## ABSTRACT

**Introduction:** Halal pharmaceuticals are paramount in healthcare settings catering to Muslim patients. The COVID-19 pandemic ignited discussions on the Halal status of pharmaceuticals, especially vaccines. This study aims to explore the understanding and views of hospital outpatients regarding Halal pharmaceuticals.

**Materials and Methods:** A qualitative study by in-depth interviews was undertaken among adult Muslim outpatients. Utilising a semi-structured interview guide in Malay, content reliability of the guide was ensured through expert reviews. Potential participants were approached in the outpatient pharmacy waiting area. All interviews were audio recorded and transcribed verbatim. These Malay transcripts were translated into English and subjected to thematic content analysis.

**Results:** Data saturation was achieved through interviewing ten outpatients. The findings indicated that patients were vigilant in checking labels to confirm the correctness of their medications. Yet, the terms 'Halal pharmaceuticals' and 'Shariah-compliant hospital' were unfamiliar to all and did not evoke curiosity. The respondents expressed trust in the government's commitment to dispense safe and Halal-certified drugs. The majority of the participants did not consider Halal status as a primary factor when selecting medications. Nevertheless given a choice, many voiced a preference for Halal-certified drugs, irrespective of their cost or efficacy. For life-threatening situations, participants were willing to accept non-Halal treatments.

**Conclusion:** Despite non-familiarity, the general sentiment towards Halal pharmaceuticals remain positive. This study underscores the need for enhanced education and awareness regarding Halal pharmaceuticals for better align healthcare practices with the cultural and religious values of Muslim patients.

## KEYWORDS:

*Islam, exploratory behaviour, trust, pharmaceutical preparations, Halal*

## INTRODUCTION

Halal goes beyond conventional industry-sector, geographical, cultural and even religious boundaries. 'Halal'

means allowed or legal as per Islamic laws.<sup>1</sup> As per definition, Halal foods are defined as those that are free from any prohibited element. Recently, 'Halal' and 'Haram' terms have been extensively used to help consumers make educated choices.<sup>2</sup> Halal pharmaceuticals have expanded globally. According to research conducted by the World Halal Secretariat, it was estimated that the global Halal market in 2010 was USD 2.3 trillion, of which 22% represents the pharmaceutical industry.<sup>3,4</sup> This is especially true for Malaysia as a Muslim-majority country and a leading global Halal Hub.

Halal pharmaceuticals are defined in the standard MS2424:2019 as "pharmaceutical products that contain ingredients permitted under the Shariah law and fulfill the condition."<sup>5</sup> Halal comprises both safety and trustworthy elements, especially in Shariah-compliant hospitals.

Patients have rights, especially the right to be informed as not everyone has the same knowledge and awareness of Halal pharmaceuticals. Nevertheless, some patients refuse to follow treatments due to hesitations or unclear information on their medications' origin, leading to possible treatment failure.<sup>6</sup> Despite being fundamental issue, not everyone has the same knowledge and awareness of Halal pharmaceuticals. The Halal status of pharmaceuticals also raised many doubts, especially recently with the introduction of COVID-19 vaccines. For example, a general practitioner spread false news that the CoronaVac COVID-19 vaccine (Sinovac Biotech Ltd., Beijing, China) contains pig's blood in the state of Perlis, Malaysia.<sup>7</sup>

To the best of our knowledge, no published qualitative study in Malaysia regarding Halal pharmaceuticals exists. In Malaysia, there was only one quantitative research study conducted in Penang regarding knowledge, attitude and perception on Halal pharmaceuticals among the general public: better knowledge of Halal pharmaceuticals is associated with positive perceptions and behaviour.<sup>8</sup> This gap in the literature highlights the need to understand patient perspectives to improve healthcare delivery and align it with cultural and religious values. Our study aims to explore the understanding of Halal pharmaceuticals among outpatients of Hospital Tuanku Fauziah (HTF), the state hospital of Perlis, Malaysia.

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## MATERIALS AND METHODS

A qualitative study was conducted through face-to-face, in-depth interviews from August 2021 to April 2022 among adult Muslim patients who collected their medications in the outpatient pharmacy. Patients on routine management of chronic diseases were targeted for inclusion as they were constant medicine users. Semi-structured interviews were chosen to encourage patients to give their understanding and enable them to voice out opinions more comprehensively. Those unable to communicate in Malay or English were excluded.

A semi-structured interview guide was prepared and underwent content trustworthiness with the State Mufti, a Malaysian pharmacy professor, two pharmacists with a special interest in Halal pharmaceuticals and Islamic Affairs Officers from the Ministry of Health Malaysia (MOHM) and the hospital. Subsequent iterations were made based on their feedback, improving clarity and relevance. A pilot interview was conducted to test the guide, leading to minor adjustments for better comprehensibility.

Potential candidates were recruited by purposive sampling, focusing on information-rich cases concerning the phenomenon of interest. Patients of various sociodemographics, medical conditions and the number and types of medicines were considered. Potential subjects were screened based on the prescriptions collected and were approached in the waiting area to collect their medications. Those interested were invited to a pharmacy counselling room and were briefed on the study.

The interview began after obtaining the participants' informed consent. The interviews were conducted by a trained co-investigator with a background in pharmacy and training in Halal pharmaceuticals. To ensure impartiality, the co-investigator received specific training on conducting qualitative interviews and maintaining objectivity. The sessions were audio-recorded using digital recorders and transcribed verbatim. Field notes were taken during the sessions to capture contextual information. The transcripts were prepared by the same interviewer. Counterchecking of the transcripts was done by an independent co-investigator to ensure accuracy and consistency. The transcripts further underwent member-checking by emailing participants to check for accuracy and resonance with their experiences.

All transcripts were back-translated into English. The transcripts were analysed by thematic content analysis independently by all four investigators. The analysis was conducted iteratively after each interview to identify emerging themes and determine data saturation. Six phases method was used, including Phase 1: Researchers familiarised with all the data collected, Phase 2: Generating initial codes, Phase 3: Searching for themes, Phase 4: Reviewing themes, Phase 5: Defining and naming themes and Phase 6: Producing the report.<sup>9</sup> All the discrepancies were resolved by consensus.

Data saturation guided the determination of the sample size.<sup>9,10</sup> Data saturation is a point in qualitative research

where additional interviews no longer provide new insights or themes. This concept ensures that the sample size is sufficient to capture the necessary depth and breadth of information for the study. Ethical approval was obtained from the Medical Research & Ethics Committee, MOHM (NMRR-21-1548-6089) before the conduct of the study. The study was conducted and reported according to the consolidated criteria for reporting qualitative studies (COREQ) guideline.<sup>10</sup>

## RESULTS

Data saturation was achieved at the 10th interview. The interview lasted 30 to 60 minutes for each session. Most were elderly, male, having secondary education, retiree or self-employed and under medical clinic follow-up for about 10 years (Table I). Four themes emerged inductively: (1) Experience with medicines, (2) Concept of Halal pharmaceuticals and Shariah-compliant hospitals, (3) Confidence in Halal medicines and (4) Acceptance of Halal medicines and vaccines. Despite the high importance of Halal pharmaceuticals in Shariah-compliant hospitals, there is a notable gap in awareness among patients. The study participants were generally not familiar with the concepts of Halal pharmaceuticals or Shariah-compliant hospitals, which did not pique their curiosity.

### *Experience with Medicines*

*All participants mainly focused on receiving the correct medication. They read the name of the medication except for some who observed the packaging and confirmed with the internet or pharmacists.*

*"First, I look at the name of the medicines and expiry date. I looked in the envelope, for anything in there. Sometimes, the brand name is different. So, I rechecked on the internet." (P1)*

*"I do ask the pharmacist about it, like why the medications were changed." (P9)*

*"Like metformin, recently they changed the brand. I do ask about it, the pharmacist explained that they are the same medication." (P10)*

Some were particular about the expiry date due to bad experiences.

*"When buying from the pharmacy, there are some incidents that they mistakenly sell expired medicines." (P5)*

Respondents had the confidence to self-purchase after doctors' recommendations besides prescribed medicines.

*"The two medications that I bought from a pharmacy were suggested by the doctor." (P6)*

### *Concept of Halal Pharmaceuticals and Shariah-Compliant Hospitals*

Most had not heard of 'Halal pharmaceutical' and 'Shariah-compliant hospitals'. P4 and P6 were not sure what was meant by 'Halal pharmaceuticals'. P7 and P9 had heard the term 'Shariah-compliant hospital' but never dug deeper.

**Table I: Sociodemographics and conditions of patients**

Patient	Age	Gender	Education level	Occupation level	Clinic: No. of medicine prescribed	Year of treatment
P1	72	M	Tertiary	Teaching assistant	Medical:11	20
P2	38	M	Secondary	Administrative assistant	Medical: 7	4
P3	51	M	Secondary	Self-employed	Medical:7	6
P4	66	F	Primary	Housewife	Medical:9; Ortho.:7; Skin:6	11
P5	55	M	Secondary	Police officer	Medical:7	3
P6	60	F	Tertiary	Ex-teacher	Medical:8; Psy:1	19
P7	76	M	Primary	Self-employed	Medical:7	5
P8	65	M	Secondary	Retired clerk	Medical:8; Surgical:1; Ortho:4; ENT:3; Skin:6	6
P9	52	F	Tertiary	Teacher	ENT:3	3
P10	52	F	Tertiary	Nurse	Medical:9; Skin:6; ENT:1	25

Ortho: Orthopedics, Psy: Psychiatry, ENT: Ear, Nose, and Throat.

*“I think it has the same concept as Halal food, but applied to medicines. For example, making medicines from Halal sources, including the process of making it and the responsible party to approve it as Halal.” (P9)*

*“I have heard of ‘Shariah-compliant hospitals’, but never investigated it.” (P9)*

*“I never know about these terms.” (P10)*

Those who have heard it based their understanding on the word Halal itself.

*“From the process of making to finish, it needs to follow Islamic procedures, Halal.” (P1)*

*“I think it has the same concept as Halal food, but applied to the medicines.” (P9)*

*“Similar to Halal food. Since both of them go inside our body.” (P10)*

**Confidence in Halal Medicines**

Most respondents were confident about the Halal status of their medicines as long as the government provided them.

*“For that, we assume it’s under government because they are the ones that supply it....” (P1)*

*“If MOHM wants to bring the drugs into use, they must have referred to any religious department. For example, like the COVID-19 vaccines that were bought from overseas.” (P3)*

Some never think about it and assume all medicines were Halal as long as the government provided them.

*“If the medicines from public hospitals, I thought of them as Halal. I was prescribed insulin, I heard from my friends that it is not Halal. There is no way the government would give non-Halal medicine.” (P6)*

*“Never thought about it. I believe in the public hospital. Because before procuring the medications, the pharmacists and doctors will go through the details.” (P8)*

**Acceptance of Halal Medicines and Vaccines**

Only one respondent (P3) did not accept any non-Halal treatment, while others agreed with life-saving conditions.

*“If it were not for life-saving and other options are available, I would reconsider.” (P2)*

*“I agree (to take non-Halal medicines) if it falls under an emergency state.” (P5)*

Patients chose Halal medicines over affordability and effectiveness, provided it is non-emergency.

*“Would choose haram but more effective, if an emergency.” (P2)*

*“I agree since it falls under an emergency state.” (P5)*

*“It will depend on our condition. If we are in critical condition, I will choose the more effective one. If we can still tolerate the disease, I will choose the Halal one.” (P10)*

All patients had taken the second and third doses of the COVID-19 vaccine regardless of Halal status. A patient will not take it if the vaccine is not Halal. Only a fraction would like to receive the fourth dose of the COVID-19 vaccine.

*“I never thought about the Halal status of the vaccine. If it is mandatory in my workplace, then I have no choice.” (P2)*

*“I went for vaccination immediately when allowed to the public. Halal status of the vaccine did not influence our family’s decision to get COVID-19 vaccine.”(P8)*

**DISCUSSION**

In our study, the patients were more alert on the medication labelling of the expiry date. Hence, this is the first thing they would look at when receiving medicines. As supported by a study, patients expressed concerns about taking medications if they had bad experiences in the past.<sup>11</sup>

There is a notable gap in awareness of Halal pharmaceuticals and Shariah-compliant hospitals among patients. The study participants were generally not familiar

with the concept of Halal pharmaceuticals or Shariah-compliant hospitals, which did not pique their curiosity. Our findings are similar to a qualitative study in Nigeria in which only half of patients and doctors were conversant with the Halal pharmaceuticals concept.<sup>12</sup> In contrast, a quantitative study in Penang, Malaysia found that about 91.2% of general public were aware of the term 'Halal medicine'.<sup>8</sup>

All patients trust the authority or government to choose the safest and Halal medicine. Patients said it was the doctors' responsibility to provide information to them.<sup>13</sup> Government initiatives are essential to increase access to Halal products, including pharmaceuticals, leading to public trust.<sup>14</sup> There is a strong trust among the outpatients in the Malaysian government's ability to regulate and provide safe and Halal-certified pharmaceuticals. This trust seems to override the need for personal vigilance concerning the Halal status of their medications.<sup>15</sup>

Vaccines produced from porcine origin are not permissible in Malaysia unless there is an urgent need to use these kinds of vaccines.<sup>12</sup> Halal medicine knowledge has a positive and significant effect on Halal medicine purchase repetition.<sup>16</sup> Patients preferred being informed regarding the Halal status of the treatment.<sup>14</sup> Hence, healthcare professionals must acknowledge that patients make independent assessments regarding medication adherence.<sup>17</sup>

In life-threatening situations, the acceptance of non-Halal treatments highlights the pragmatic approach taken by patients. This finding is in line with Islamic teachings, which allow for the consumption of non-Halal substances if one's life is in danger.<sup>18</sup>

The findings of this study highlight the complex interplay between religious beliefs, trust in government and healthcare decisions. The general unfamiliarity with 'Halal pharmaceuticals' and 'Shariah-compliant hospitals' among participants suggests a significant knowledge gap. Despite this, there was a high level of trust in the government-provided medications, with patients generally assuming their Halal status. This trust underscores the importance of government and healthcare providers in shaping patients' perceptions and acceptance of pharmaceutical products.

The lack of knowledge may negatively impact medication adherence if patients harbour doubts or misconceptions about their medications' Halal status. As the results showed, most patients currently have confidence in medications provided by government hospitals. However, misleading information or rumours could easily shake this trust. Proactive education is essential to preemptively combat misinformation.

The market potential for Halal pharmaceuticals remains untapped locally. Participants expressed willingness to prefer Halal pharmaceuticals if given a choice. However, they currently lack the background knowledge to make informed decisions. Both public and private sectors can leverage this interest by improving consumer education on Halal pharmaceutical concepts, choices and benefits.

This study has some limitations. Firstly, the focus on a single-state hospital limits the generalisability of the findings to the broader Malaysian Muslim population. Furthermore, as the study relied on self-reported data from interviews, there might be biases in the responses, such as social desirability bias. Also, the study did not include non-Muslim patients, who may have different perspectives on Halal pharmaceuticals.

Further research with larger and more diverse samples is recommended. Mixed-methods approach could be employed to collect quantitative and qualitative data to provide a more comprehensive understanding of the issue. Additionally, exploring healthcare professionals' perspectives and subsequently their roles in educating patients about Halal pharmaceuticals is crucial as well. Finally, examining the impact of education and awareness programs on the understanding and acceptance of Halal pharmaceuticals would be beneficial.

## CONCLUSION

There was a gap in the understanding of Halal pharmaceuticals among hospital outpatients, although Halal status was not a priority. Most of them relied entirely on doctors or pharmacists to decide on the medicines. If options were available, most of them would choose Halal medication regardless of its price and effectiveness. Most accept any treatment regardless of Halal status under life-saving conditions. As the global Halal pharmaceutical industry expands rapidly, Muslim-majority Malaysia is well-positioned to take a leading role. However, realising this potential will require proactive efforts to educate consumers and leverage market interest.

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## REFERENCES

1. Awan H, Siddiquei A, Haider Z. Factors affecting halal purchase intention—evidence from Pakistan's halal food sector. *Manag Res Rev* 2015; 38(6): 640-60.
2. Saira N, Rana M, Irfan I, Sobia S, Tahir M. Systematic literature review of halal food consumption research era 1990-2017. *J Islam Mar* 2020; 11(3): 687-707.
3. Noriah R, Naemah A, Majdah Z, Norazlina A. Healthcare services: Halal pharmaceutical in Malaysia, issues and challenge. *Malays J Consum Fam Econ* 2017; 20(S1): 101-13.
4. Tieman T. Establishing the principles in halal logistics. *J Emerg Econom Islam Res* 2013; 1(1): 1-13.

5. Department of Standards Malaysia. Halal pharmaceuticals-General requirements (MS2424). First revision. 2019.
6. Ainsley J. Clinical Ethics Case Study 9: Should we inform our patient about animal products in his medicine? *Clin Ethics* 2009; 5(1): 7-12.
7. Sharif A. Berita palsu, doktor kena denda RM5,000. *Berita Harian*. [cited January 2021] Available from: <https://www.bharian.com.my/berita/kes/2021/06/831253/berita-palsu-doktor-kena-denda-rm5000>.
8. Saleha S, Azmi S, Imran M, Fahad S, Muhammad A. Knowledge, Attitude and Perception Regarding Halal Pharmaceuticals among General Public in Malaysia. *Int J Public Health* 2013; 10(4): 143-50.
9. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res J* 2006; 3(2): 77-101.
10. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007; 19(6): 349-57.
11. Moen J, Bohma A, Tillenius T, Antonov K, Nilsson L, Ring L. "I don't know how many of these [medicines] are necessary."—a focus group. *Patient Educ Couns* 2009; 74(2): 135-41.
12. Annabi CA, Wada SM. Halal pharmaceutical industry in Nigeria: a bitter pill to swallow. *J Emerging Economies Islamic Res* 2016; 4(2): 67-78.
13. Lorimer S, Cox A, Langford N. A patient's perspective: the impact of adverse drug reactions on patients and their views on reporting. *Clin Pharm Therap* 2012; 148-52.
14. Soraji AJ, Awang MD, Yusoff ANM. Malaysia halal trust: between reality and challenges. *Int E-J Advances Social Sci* 2017; 3(7): 197-204.
15. Rahman MK, Zainol NR, Nawi NC, Patwary AK, Zulkifli WFW, Haque MM. Halal healthcare services: patients' satisfaction and word of mouth lesson from islamic-friendly hospitals. *Sustainability* 2023; 15(2): 1493.
16. Vizano N, Fitria A, Mohamad N, Muqtada M. Halal medicine purchase intention among South East Asian Consumers. *Eur J Mol Clin Med* 2020; 7(7): 58-77.
17. Gordon K, Smith F, Dhillon S. Effective chronic disease management: patients' perspectives on medication-related problems. *Patient Educ Couns* 2007; 65(3): 407-15.
18. Latiff J, Man S, Zakaria Z. The challenges in implementation of halal vaccine certification in Malaysia. *J Food Pharm Sci* 2021; 9(1): 366-7.