



## Impact of Religiosity, Halal Knowledge, and Media on Patient Drug Choices: An Exploratory Study

Favian Rafif Firdaus<sup>1\*</sup> , Alsita Salsabila Yulnanda<sup>1</sup> , Annisa Mustika Eka Putri

<sup>1</sup> Apotek Sugeng, Pharmacy Store, Indonesia

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### Abstract

The halal lifestyle is rapidly growing in both muslim-majority and non-muslim countries, yet research on halal pharmaceuticals remains limited. This study aims to identify key factors influencing muslim patients' decisions to purchase halal drugs in pharmacies, providing insights for the pharmaceutical industry to strengthen influential aspects. Conducted in Surabaya, Indonesia, data were collected from 115 muslim respondents between February and April 2025. The independent variables examined were halal knowledge, religiosity, and media exposure, while the dependent variable was the decision to purchase halal drugs. Data validity and reliability were assessed using IBM SPSS Statistics 27 and SmartPLS 3.0, with analysis methods including Pearson correlation and the PLS algorithm. Influence analysis employed the SEM-PLS bootstrapping method. Results showed that only media exposure had a direct impact on purchase decisions (52.8%), while religiosity influenced decisions indirectly through media exposure (39.0%). Additionally, multicollinearity was found between religiosity and halal knowledge in relation to media exposure. The findings suggest that while religiosity plays a critical role in shaping consumption behavior, strong media exposure is essential to translate religious values into actual purchasing decisions. These insights highlight the importance of media as a strategic tool for promoting halal pharmaceuticals.

**Keywords:** *Indonesia, Islam, Knowledge, Medicine and Religion, Pharmacies*

### INTRODUCTION

Halal certification on products circulating in Indonesia is currently an important concern for the government. One of the products that must meet halal certification is medicines. This policy is implemented in line with the increasing awareness of muslim consumers on the importance of halal products (President of The Republic Indonesia, 2023). Indonesia is known as a country with a majority of the population that is muslim, the halal label is an important factor in the decision to purchase products, including medicines (National Committee for Islamic Economics and Finance, 2023). Research shows that halal labels give consumers confidence that the product is safe and compliant with Islamic law, which should influence patients' purchasing decisions (Adli & Ismail, 2024).

In addition to halal labels, other factors such as price and service quality also play a significant role in drug purchase decisions. Competitive prices can affect consumers' perception of product value, while good service quality can increase consumer satisfaction and trust (Adli & Ismail, 2024). In this context, drug manufacturers are advised to start paying attention to the importance of halal certification, setting competitive prices, and improving the quality of services to meet the needs and preferences of muslim consumers (Adli & Ismail, 2024). Awareness of the importance of halal products is also a determining factor in purchasing decisions. Research in Indonesia itself shows that halal awareness has a significant influence on the intention to buy halal medicines, especially in areas with large muslim populations such as Jakarta, Bogor, Depok, and

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Corresponding author's email: [favianfirdaus@ub.ac.id](mailto:favianfirdaus@ub.ac.id)

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Bekasi. This awareness includes an understanding of the ingredients and manufacturing process of pharmaceutical products that are in accordance with halal principles (Maslul & Priantina, 2024).

However, despite the increased awareness and demand for halal products, the availability of halal-certified drugs is still limited. This can affect consumer attitudes in the decision-making process (Maslul & Priantina, 2024). Therefore, the pharmaceutical industry needs to increase the availability of halal-certified products to meet the growing market demand (Maslul & Priantina, 2024). Previous studies have not shown the role of knowledge, religiosity, and the role of information media exposure to a person in influencing the purchase decision of halal-certified drugs.

This research is designed to explore the role of halal-related knowledge, religiosity, and information media exposure in influencing patients in purchasing halal-certified medicines. In general, research on the purchase decision of halal drugs at pharmacies only looks at factors such as halal labels, prices, service quality, halal awareness, promotion, and brand image (Ismail et al., 2022; Shabrina et al., 2023; Umah & Herianingrum, 2018). Based on the research gap that has been carried out previously, this study aims to find out whether factors such as halal-related knowledge, religiosity, and exposure to information media can influence patients' decisions in purchasing halal-certified drugs.

The selection of this knowledge variable refers to the theory of consumer behavior, where knowledge is the main factor for a person in seeking information and determining choices before buying drugs (Blackwell et al., 2017). Regarding the religiosity variable, the selection was based on the theory of Religiosity as a Personal Value System, which states that religious consumers tend to have conservative values and adherence to norms, which is reflected in the choice of products according to religion (Schwartz, 1992). Then the selection of information media exposure variables is taken from the theory of the Elaboration Likelihood Model, which states that information exposure can affect the decision to choose patient products through two acceptance models, namely through the content and quality of the product, then the second is the receipt of information through who informs (Petty & Cacioppo, 1986).

The virtue in the analysis of the exploration of the role of knowledge, religiosity, and exposure to information media, it is hoped that the results will be able to help the pharmaceutical industry to be more effective in meeting the needs of muslim consumers and increasing competitiveness in the drug market. This practice of meeting the needs of muslim consumers is expected to be able to increase the sales turnover of the pharmaceutical industry.

## LITERATURE REVIEW

In recent years, interest in halal products, including pharmaceuticals, has grown significantly in line with increasing awareness among muslim consumers about the importance of aligning their consumption with religious values. Various studies suggest that halal-related knowledge serves as a foundational factor. Consumers who are well-informed about what constitutes halal products, how certification works, and its implications for health and spirituality tend to be more confident and selective in choosing halal-labeled medications (Kasri et al., 2023).

However, knowledge alone is often not sufficient. Religiosity, personal commitment to religious beliefs and practices, plays a crucial role in shaping consumption behavior. Highly religious individuals are generally more inclined to seek products that align with their faith, even if it requires more effort or cost (Fauziah & Al Amin, 2021).

Interestingly, recent research highlights that the influence of knowledge and religiosity on purchase decisions is often mediated by media exposure. Media platforms, social campaigns, halal logos, and public health messaging act as key enablers, transforming passive awareness into active purchasing behavior. Without strong media reinforcement, even high levels of religious

commitment or knowledge may not translate into concrete buying decisions (Akbar et al., 2025; Setiawan et al., 2024).

The purchase decision of halal-certified drugs is influenced by various psychological and social factors that shape consumer perceptions and preferences. In support of this research hypothesis, namely the influence of knowledge, religiosity and exposure to information media on the purchase decision of halal-certified drugs, several supporting theories state that consumers who have a better understanding of the concept and benefits of halal tend to have a positive attitude towards the product, as explained in the Theory of Planned Behavior (TPB) and Consumer Decision-Making Model (Ajzen, 1991; Erasmus et al., 2010). In addition, religiosity plays a strong role as a personal value that encourages adherence to religious teachings, influencing subjective norms and consumption behaviors, as described in Schwartz's Value Theory and the TPB (Ajzen, 1991; Schwartz, 1992). Meanwhile, exposure to information media, both through social media and mass media, also influences consumer attitudes and intentions through central and peripheral persuasion channels as described in the Elaboration Likelihood Model (Petty & Cacioppo, 1986). Based on these theories, it can be assumed that knowledge, religiosity, and exposure to information media have a positive influence on consumers' decisions to buy halal drugs. If these three variables are combined in one conceptual framework, then this study not only enriches the theory of value- and information-based consumer behavior, but also provides a basis for practical interventions for the pharmaceutical industry and halal authorities to improve consumer literacy and preference for halal-certified drugs.

## RESEARCH METHOD

### Design and Participants

The survey uses a printed questionnaire filled out by respondents directly. The questionnaire was given to patients who visited pharmacies in the Surabaya City area who were willing to become respondents. The study was exploratory quantitative research, obtaining 115 respondents who were willing to participate through the accidental sampling method. The sample size was obtained from the results of the calculation of the Slovin formula with an unknown population number. Referring to Hair et al. (2014), assuming an  $R^2$  value of 0.25 (moderate category) for the Buying Decision construct, and the number of predictor paths as many as four, a minimum of 65 respondents is required. However, to increase the statistical power and accuracy of the model, this study targeted a sample of 115 respondents to obtain more accurate results (Hair et al., 2014).

Inclusion criteria that were applied were age  $\geq 17$  years, muslim, had bought drugs at pharmacies, and were willing to be research respondents. The exclusion criteria in this study are someone who has never bought drugs at a pharmacy and is unable to read and understand Indonesian well.

### Research Ethics

The ethics board of the Faculty of Dental Medicine Universitas Airlangga agreed to this study and the protocol on February 12, 2025 (0241/HRECC.FODM/II/2025).

### Recruitment Strategy

Visit several pharmacies in the Surabaya City area, then ask permission from the pharmacist in charge to offer a willingness to fill out questionnaires for patients who come and buy drugs at pharmacies during February-April 2025. As an incentive, health multivitamins are offered to patients. For this purpose, those interested in the incentive must provide their contact options and consent to the use of their contact details.

### Research Instrument

The study that explored several factors that have the potential to influence the decision to purchase halal-labeled drugs at pharmacies has independent variables in the form of halal-related knowledge, religiosity, and exposure to information media. Then for the dependent variable is the decision to purchase halal-labeled drugs at pharmacies by patients. The questionnaire was prepared independently with reference to halal guidelines from the Indonesian government and several previous studies ([Julpa & Napitu, 2023](#); [President of The Republic Indonesia, 2023](#); [Triantoro et al., 2020](#)). In the questionnaire in the knowledge section, there are 15 questions with a dichotomous answer scale. This question section explores how deep knowledge and understanding are related to halal in general, haram ingredients, and halal medicines. If the respondent answers correctly in that part, he will get 1 point, then if he is wrong, he will not get points. The second part is religiosity, this part aims to measure how strong the respondents' belief in Islamic sharia is, especially in terms of regulating halal and haram that muslims are allowed to consume. In this section, it consists of five questions with a five-level likert scale answers; if the respondent answers very disagree, they will get 1 point, and if they answer very agree, they will get 5 points. Furthermore, in the third part, namely the exposure to information media, there are four questions with a five-level Likert answer scale; the answer points are the same as the belief in Islamic law. The dependent variable section, namely the decision to purchase halal labeled drugs, has eight questions; the answer scale in this section is in the form of a five-level Likert with the same answer points ranging from strongly disagree to strongly agree.

### Data Analysis

The data that has been collected is analyzed for validity and reliability using the outer model analysis of the SEM-PLS method with the help of the SmartPLS version 3 application. Then for descriptive analysis of the socio-demographic of the respondents and the mean value of  $SD \pm$  of each variable will be analyzed using the IBM SPSS Statistics 27 application. To analyze the influence of each independent variable on the dependent variable using the internal model analysis of the SEM-PLS method, the method is suitable for exploratory analysis and has the advantage of not paying attention to the assumption of normality and homogeneity of data ([Monecke & Leisch, 2012](#))

## FINDINGS AND DISCUSSION

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### **CONCLUSIONS**

This study confirms that media exposure has the strongest direct influence on patients' decisions to purchase halal-certified drugs (52,8%), while religiosity contributes significantly through an indirect pathway (39,0%) via media exposure. In contrast, halal knowledge alone does not show a direct or indirect significant effect on purchase decisions. These findings align with the theory of the Elaboration Likelihood Model, which emphasizes the dual process of media influence,

as well as with the Religiosity as a Personal Value System theory and the Consumer Decision-Making Model. Together, they support the hypothesis that religious beliefs, media exposure, and knowledge shape consumer behavior. Integrating these three variables into a unified model provides valuable insights not only for theoretical development in halal consumer behavior but also offers actionable strategies for pharmaceutical companies to effectively communicate and increase demand for halal healthcare products.

### LIMITATION & FURTHER RESEARCH

This study offers valuable insight into how media exposure, religiosity, and halal knowledge influence the decision to purchase halal-certified drugs. However, there are limitations to consider. The research was limited to a single city, Surabaya, which may not reflect the broader diversity of muslim communities in Indonesia. In addition, the use of self-reported data can be prone to bias, especially in assessing personal religiosity. These challenges are common in halal behavior studies and call for more diverse samples and robust methodologies in future research (Zafar et al., 2025). Future studies should consider expanding to multi-regional or national samples, incorporating longitudinal data, and exploring emerging factors such as digital media influence and consumer trust. Scholars are also encouraged to examine non-muslim perspectives and intergenerational differences to enrich understanding of halal consumption behavior in increasingly pluralistic markets (Fatmi et al., 2020). Such research will support the evolving halal pharmaceutical industry and its role in inclusive healthcare.

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