

## **DEVELOPMENT OF KNOWLEDGE, PERCEPTIONS, AND PUBLIC ATTITUDES QUESTIONNAIRE FACING THE ERA OF COMPULSORY HALAL MEDICINE CERTIFICATION**

**Ahmad Azrul Zuniarto<sup>1,2\*</sup>, Nurkhasanah Mahfudh<sup>2</sup>, Dyah Aryani Perwitasari<sup>2</sup>, Siti Pandanwangi<sup>1,2</sup>**

<sup>1</sup> *Departement of Pharmacy, Faculty of Pharmacy, YPIB University, Majalengka, Indonesia.*

<sup>2</sup> *Departement of Pharmacy, Faculty of Pharmacy, Ahmad Dahlan University, Yogyakarta, Indonesia.*

*\*Email Corresponding: [aazuniarto@gmail.com](mailto:aazuniarto@gmail.com)*

**Submitted: 7 October 2023**

**Revised: 1 November 2023**

**Accepted: 1 November 2023**

### **ABSTRACT**

A questionnaire is an instrument used to collect data from several people or respondents through a set of questions to be answered. The validity and reliability of the questionnaire describe how well the preparation of the questionnaire was related to the measurement scale. Reliability indicates that the questionnaire is consistent when repeatedly used. This study aimed to obtain a valid and reliable questionnaire on community knowledge, perceptions, and attitudes toward halal drugs. The reliability of the knowledge questionnaire, perceptions, and attitudes was defined using Cronbach's alpha. This cross-sectional study was conducted online from January to February 2023, with 600 respondents in six provinces on Java Island. The knowledge questionnaire validation test used Point Biserial, perception, and attitude of using the Pearson Product Moment. The majority of respondents were aged <25 years (73%), the dominant last level of education was the secondary level (66.5%), and most of the jobs were students (38.7%). The r value of the knowledge domain obtained is (0.209-0.662) which was greater than the r table (0.080) and met the validity criteria, the perception domain (0.471-0.764), and the attitude domain (0.250-0.757) which is greater than the r table and satisfies the validity criteria. The Cronbach's alpha value of the knowledge domain obtained was 0.730, that of the perception domain was 0.756, and that of the attitude domain was 0.723, which was > 0.6 and meets the reliability criteria. In conclusion, the questionnaire on the community's knowledge, perceptions, and attitudes toward halal medicines met valid reliable criteria and can be applied in Indonesia.

**Keywords:** Validation, Questionnaire, Attitude Perception Knowledge, Halal, Drug.

### **INTRODUCTION**

The term halal is known in Islamic teachings originating from the Qur'an and hadith which means something permissible by Islamic law covering various aspects of life, such as behavior, how to earn luck, how to dress, and the food or drink consumed (Ali, 2016; Hijriawati, Putriana and Husni, 2018). Islam views health as a crucial factor in human life, and because of that, the Prophet teaches how to live a healthy life (Sarwat, 2017; Marfuah, 2020). Specifically the Prophet Muhammad Saw. emphasized seeking treatment while warning not to seek treatment with unclean things (Abduh et al., 2017; Yenti, 2018), as he said: "Allah bestow disease and medicine, and made a cure for every disease; therefore, seek treatment and do not seek treatment with unclean objects" HR. Abu Daud.

Halal medicines are medicinal products that come from permitted sources, namely animals, plants, and organic or inorganic materials and follow the methods of preparation, manufacture, and extraction that follow the rules in Islam (Rahem, Effendi and Faridah, 2021). Halal medicines not only have to be free from harmful substances but also have to be thoyib (Kamal, 2017). Generally, thoyib refers to products that are clean, pure, and manufactured according to standard processes and procedures (Tushar Saha, Tashnuva Rifat and Shimanto, 2019). Therefore, pharmaceutical products must not only be halal but must

also be clean according to Islamic law (Sarriff and Abdul Razzaq, 2013). Awareness of the use of halal medicines has increased among doctors, pharmacists, and the general public (Sadeeqa et al., 2013, 2015; Sadeeqa, 2015). Although Muslims are generally permitted to consume haram (forbidden) products in life-threatening situations, the demand for medicines that comply with Islamic law is still increasing (Muhammad Galib, 2015). The halalness of pharmaceutical and health products is a concern for Muslim consumers. Therefore, the global demand for halal medicines continues to increase, making pharmaceutical and health products a major area of growth in the global halal industry (Setyaningsih, 2022).

Halal guarantees in Indonesia are officially recognized and supported by the state with the issuance of Law No. 33 of 2014 concerning halal product guarantees (JPH) (Bintan Dzumirroh Ariny, 2020). The issuance of this law implies that the state officially recognizes and guarantees Islamic law, which is the obligation to consume halal food and thoyib. In addition, halal certification carried out by the MUI has been carried out by a government agency under the Ministry of Religion, the Halal Product Guarantee Agency (BPJPH). The implementation of this law is regulated in Government Regulation No. 31 of 2019 concerning Regulations for Implementing Law Number 33 of 2014 concerning Guarantees for Halal Products, and their technical provisions are regulated in Government Regulation No. 39 of 2021 concerning Implementation of the Halal Product Assurance Field (Kementerian Sekretariat Negara RI, 2021). Where goods and/or services related to food, drink, medicine, cosmetics, chemical products, biological products, genetic engineering products, and consumer goods used, used, or used by the public must be halal certified. Halal mandatory stage 1 takes effect on October 17, 2019 (food products, slaughter drinks, and slaughter services), and phase 2 applies October 17, 2021, for all products.

Knowledge results from curiosity through sensory processes, especially in the eyes and ears of certain objects (Ridwan Syukri and Badarussyamsi, 2021). Knowledge is an important domain in the formation of open or open behavior. The perception of halal products is how they view the importance of the halal products to be consumed. Consumer perceptions of the importance of halal can influence behavior (Kurniawati and Sumarji, 2018). Halal awareness can be divided into intrinsic and extrinsic awareness. Intrinsic refers to religion that incorporates religious values. Individuals with an intrinsic halal awareness ensure that what they eat is halal. This shows that Muslim consumers' awareness of halal food is influenced by their understanding of the concept (Kurniawati Kussumawati and Prambamurti, 2020).

A questionnaire is an instrument in the form of a collection of questions to measure an event that researchers use to obtain information related to the research. The quality of the questionnaire used significantly influenced the research. The questionnaire consisted of several item questions prepared with alternatives that were provided so that the selected respondents could provide answers according to the actual situation (Dewi and Sudaryanto, 2020). The validity and reliability of the questionnaire were assessed before conducting the research. A validity test is a measure of the validity of the research instrument. The results of the validity and reliability tests of a research questionnaire can influence the data obtained when conducting a study (Ogren et al., 2020). Reliability relates to the consistency of the score obtained, namely how consistent it is between each individual tested by the instrument (Yusup, 2018). The greater the validity and reliability of an instrument, the more valid the data obtained from a study (Dewi and Sudaryanto, 2020). The use of research instruments tested for validity and reliability is necessary to produce valid and reliable data (Asyifa and Semiarty, 2023). Although an instrument is standardized and reliable, it does not directly make the instrument usable anywhere, anytime, or any subject. The instrument must be tested again every time it is used.

Indonesia has the potential to become a major player in the production of halal medicines (The & Economy, 2019). Early detection of problems will become a reference for policymaking, where positive knowledge, attitudes, and perceptions of halal medicines will increase the market for halal medicines. Research on knowledge, perceptions, and attitudes

towards lawful medicine that have been carried out are still limited in scope, both in the number of respondents, the range of the area, and the types of questions (Syahrir, Rahem and Prayoga, 2019; Rahem, Effendi and Faridah, 2021; Ramadhanti, 2021).

## RESEARCH METHODS

This study used a cross-sectional design that was conducted online using questionnaires in Indonesian regarding knowledge, perceptions, and public attitudes towards halal provisions, halal medicines, guarantees for halal products, the need for halal medicines, and doctor/pharmacist services related to halal medicines validated by experts. The research was conducted from January to February 2023, with 600 respondents spread across the six provinces of the island of Java, including West Java Province, DKI Jakarta, Banten Province, Central Java Province, DI Yogyakarta, and East Java Province. This election is due to the large number and percentage of Muslims, so it is expected that they will be familiar with the rules of halal-haram according to Islamic rules (Badan Pusat Statistik, 2023). This research was not limited to Muslims; the island of Java was chosen because it is predominantly Muslim. The questionnaire was filled in on a Google Form, which was distributed via the WhatsApp application to respondents taken randomly through purposive sampling. This research received ethical approval from the Faculty of Medicine, Swadaya University Gunung Jati No. 163/EC/FKUGJ/XI/2022.

The number of respondents was at least 10 times the number of questionnaire questions with the inclusion criteria being over 17 years old and the exclusion criteria not working as a doctor or pharmacist. The respondents' demographic data included age, last education, and occupation. The questionnaire consists of 3 domains, knowledge, perceptions, and attitudes, statement of knowledge using Guttman where respondents were asked to choose the option "Yes (score 2)" or "No (score 1)," statements of perceptions and attitudes, using a scale Likert four points ranging from "strongly agree (score 4)," "agree (score 3)," "disagree (score 2)," "strongly disagree (score 1)." Knowledge questions about halal provisions consist of two indicators: the public's understanding of halal products, and the community's ability to apply halal and haram laws. Questions about public knowledge regarding the halalness of drugs consisted of three indicators: regulations on guaranteeing halal products, knowledge about halal medicines, and critical points for halal products. Public perception of halal products consists of two indicators: the importance of halal products for society and the assurance of the quality of halal products. Public perception of halal product guarantees consists of two indicators: public perception of halal product guarantees and drug manufacturers' guarantees of halal medicines. Meanwhile, public perception of the need for halal medicines consists of only one indicator: doctors' and pharmacists' services for halal medicines. Public attitudes towards the halal status of products with community indicators give positive responses regarding the halal status of products and people's attitudes towards the behavior of doctors and pharmacists who are concerned about the halalness of drugs with indicators that the community receives services regarding the halalness of drugs, and the community thinks positively if pharmacists provide information about halal drugs.

Content validation of the knowledge, perceptions, and attitudes of the public towards halal medicines was carried out in 2 stages. The first stage involved sending a draft questionnaire to pharmacists (2 people) and halal product experts (1 person) with 2 forms attached. Form 1 assesses all questions using a Likert scale of 4 (strongly agree, agree, disagree, strongly disagree), and Form 2 provides feedback and suggestions for each question. Questionnaire questions that received a rating of disagree or strongly disagree from at least one expert were excluded from the questionnaire draft questionnaire. The second stage was carried out through direct discussions with psychologists to obtain questionnaires that the public easily understood in the language (Asyifa and Semiarty, 2023).

The knowledge questionnaire validation tests use Point Biserial, perception, and attitude of using the Pearson Product Moment. To test the reliability of the knowledge questionnaire, perceptions, and attitudes to use Crombach's Alpha, if the value of Rombach's Alpha is more than 0.6, then the question is declared reliable. This questionnaire can be used

to measure the level of knowledge, perceptions, and attitudes of the public towards halal medicine by calculating the percentage or average value.

## RESULTS AND DISCUSSION

### 1. Respondent Demographics

This study succeeded in recruiting 600 respondents, fulfilling the minimum requirements of 370 respondents according to 10 times the number of questions ([Raden Andriani Lestari, 2014](#)) with the composition of characteristics of the people asked including age, last education, and occupation ([Nurazizah, Ermatita and Astriratma, 2021](#)).

**Table I. Description of Community Characteristics**

Characteristics	Demographic characteristics	Frequency (%)
Age (years)	<25	438 (73,00)
	26 – 35	100 (16,67)
	36 – 45	48 (8,00)
	46 – 55	13 (2,17)
	>55	1 (0,17)
Last Education	Primary Education	52 (8,67)
	Secondary Education	399 (66,50)
	Higher Education	149 ( 24,84)
Work	Housewife	63 (10,50)
	Student	232 (38,67)
	Honorary	26 (4,33)
	Officer	186 (31,00)
	PNS/ASN	34 (5,67)
	Entrepreneur	59 (9,83)

[Table I.](#) shows that the respondents were dominated by the group aged under 25 years (73%), which was influenced by how the questionnaire was filled out online. Respondents aged under 25 years include the millennial generation, and Generation Z, one of the main characteristics of the millennial generation, is characterized by increased use and familiarity with digital communications, media, and technology. Secondary education level was the most dominant (66.5%), followed by higher education level (24.84%), because respondents live on the island of Java, where educational facilities are sufficient up to the sub-district level and people's income is better, so the need for education is a priority ([Fatmasari, 2017](#)). The most dominant occupations were students (38.67%), according to age and level of education ([Aurelia Fitria N; Dr. Sukamdi, M.Sc.; Dr. Sudrajat, 2021](#)). The composition of these demographic data resembles that of previous studies ([Normasilla Hakim and Sugihantoro, 2022](#)).

### 2. Questionnaire Content Validity

Experts wanted the knowledge domain questionnaire on halal provisions to be added to the definition of halal, haram, and things that cause an item to become haram. This expert's opinion was included in the questionnaire "Halal is permissible while haram is something that is prohibited" and "Unclean are all objects that are considered dirty by Islamic law such as carrion, blood, and animal dung". For the halal drug indicator, a question is added regarding the critical point of drug halalness: "an animal that is slaughtered not Islamically, then all parts of it cannot be eaten, including as a raw material for medicine" ([Rusmita et al., 2020](#)). Questions about institutions that have the authority to issue halal certifications and laws that guarantee halal products were

proposed by one of the experts and included as more questions before the question that the government guaranteed the halalness of drugs.

In the final stage, language selection is carried out so that it is easy to understand because the respondents have diverse understandings (Rahayu & Chen, 2020). The results of content validation by each expert—pharmaceutical experts, halal product experts, and psychology experts—obtained 18 knowledge questions, 10 perception statements, and 9 statements of public attitudes toward halal medicines.

### 3. Questionnaire Validation Test

The questionnaire distributed to 600 respondents through the WhatsApp application was validated based on the domain. The knowledge domain uses the biserial point, and the belief and attitude domains use the Pearson product-moment test. The validation results are shown in the following tables.

**Table II. Results of Community Knowledge Questionnaire Validity Test on Halal Medicine**

NO	QUESTION	Results	
		R Table	R-Value
1	Do you understand Islamic teachings regarding the consumption of halal products? ( <i>Apakah anda faham ajaran Islam terkait konsumsi produk halal?</i> )	0.080	0.209
2	Halal is something that is "allowed" while haram is something that is "forbidden". ( <i>Halal ialah sesuatu yang "dibolehkan" sedangkan haram ialah sesuatu yang "dilarang"</i> )	0.080	0.276
3	Unclean are all objects that are considered dirty by Islamic law, such as carrion, blood, and animal dung. ( <i>Najis adalah semua benda yang dihukumi kotor oleh syariat Islam, seperti bangkai, darah dan kotoran hewan</i> )	0.080	0.270
4	Do you understand what foods, drinks, and products are forbidden by Islam? ( <i>Apakah anda faham mengenai apa saja makanan, minuman dan produk yang diharamkan oleh agama Islam?</i> )	0.080	0.313
5	Are you able to distinguish between halal and haram food, drinks, and products? ( <i>Apakah anda mampu untuk membedakan antara makanan, minuman dan produk yang halal dan haram?</i> )	0.080	0.246
6	Medicines derived from illegal substances in an emergency can be used with MUI's fatwa. ( <i>Obat yang berasal dari bahan haram dalam keadaan darurat boleh digunakan dengan fatwa MUI?</i> )	0.080	0.407
7	Do you know Law No. 33 of 2014 concerning guarantees for the halalness of a product? ( <i>Apakah anda mengetahui UU No.33 Tahun 2014 mengenai jaminan terhadap kehalalan suatu produk?</i> )	0.080	0.662
8	Do you recognize the halal logo of a product? ( <i>Apakah anda mengenal logo halal suatu produk?</i> )	0.080	0.254
9	Do you know the Halal Product Assurance Organizing Agency (BPJPH) is an institution that issues halal certificates? ( <i>Apakah anda mengenal Badan Penyelenggara Jaminan Produk Halal (BPJPH) sebagai lembaga yang menerbitkan sertifikat halal</i> )	0.080	0.525
10	Are medicines included in the products that must be guaranteed as halal by the Government? ( <i>Apakah obat</i>	0.080	0.375



	<i>termasuk produk yang wajib dijamin kehalalannya oleh Pemerintah?)</i>		
11	All medicines gradually have to be halal certified. ( <i>Semua obat secara bertahap harus bersertifikasi halal?</i> )	0.080	0.412
12	Active ingredients and drug additives must be sourced from halal materials. ( <i>Bahan aktif dan bahan tambahan obat harus bersumber dari bahan halal?</i> )	0.080	0.407
13	If an animal is slaughtered in an unIslamic way, then all parts of it cannot be eaten, including as raw material for medicine. ( <i>Hewan yang disembelih tidak secara Islami maka semua bagiannya tidak boleh dimakan termasuk sebagai bahan baku obat?</i> )	0.080	0.488
14	Cow's blood is used in the process of making medicine making the drug haram. ( <i>Darah sapi yang dipakai dalam proses pembuatan obat menyebabkan obat tersebut haram?</i> )	0.080	0.534
15	Pig fat used in the process of making medicine makes the drug haram. ( <i>Lemak babi yang dipakai dalam proses pembuatan obat menyebabkan obat tersebut haram?</i> )	0.080	0.386
16	Can alcohol from the petrochemical industry and fermented products be used for the drug production process? ( <i>Alkohol dari industri petrokimia dan hasil fermentasi boleh digunakan untuk proses produksi obat?</i> )	0.080	0.457
17	Do you know that the capsules of gelatin are probably made from elements of pork? ( <i>Apakah anda tahu bahwa kapsul dari gelatin mungkin terbuat dari unsur babi?</i> )	0.080	0.564
18	Do you know that syrup/elixir medicine contains alcohol? ( <i>Apakah anda tahu bahwa bahwa obat Sirup/Elixir mengandung alkohol?</i> )	0.080	0.597

**Table II.** shows that the results of calculating the correlation coefficient biserial point using the app SPSS for the questionnaire on public knowledge of halal drugs obtained the results of all  $r$  count  $> r$  table ( $0.209-0.662 > 0.080$ ) meaning that all questionnaire questions on public knowledge about halal drugs are valid. 8 questions had a low category validation value, 9 questions were in the sufficient category, and 1 question was in the high category (Dewi & Sudaryanto, 2020). Questions regarding halal provisions and halal logos are questions with uniform variations in the answers of respondents, so that the validity value is low, which is supported by other studies (Zia, 2021). The question about the legal basis that the government guarantees the halalness of products has the most varied responses from respondents.

Respondents answered the questionnaire on beliefs and attitudes about halal medicine by selecting "strongly agree" given a value of 4, "agree" given a value of 3, "disagree" given a value of 2, and "strongly disagree" given a value of 1. The research results are shown in Table III and Table IV.

**Table III. Results of the Questionnaire Validity Test on Public Perceptions of Halal Medicine**

NO	QUESTION	Results
----	----------	---------

		R Table	R-value
1	Halal items are important to my life ( <i>Barang-barang yang halal adalah penting bagi hidup saya</i> )	0.080	0.646
2	Consuming halal food makes me a good person ( <i>Mengkonsumsi makanan halal menjadikan saya pribadi yang baik</i> )	0.080	0.623
3	All halal-certified products are of good quality ( <i>Semua produk bersertifikat halal memiliki kualitas yang baik</i> )	0.080	0.691
4	Halal certification of drugs is the responsibility of the government ( <i>Sertifikasi halal obat adalah tanggung jawab pemerintah</i> )	0.080	0.471
5	Medicines are included in products that must be halal-certified ( <i>Obat termasuk produk yang harus bersertifikasi halal</i> )	0.080	0.762
6	Medicines that contain illegal substances can be used with MUI's fatwa ( <i>Obat yang mengandung bahan haram boleh digunakan dengan fatwa MUI</i> )	0.080	0.761
7	The medicine companies must provide information about the halal status of the drugs produced ( <i>Perusahaan obat harus memberikan informasi tentang status kehalalan obat yang diproduksi</i> )	0.080	0.738
8	Patients have the right to ask for information regarding the sources of drug ingredients to the pharmacist ( <i>Pasien memiliki hak untuk menanyakan informasi mengenai sumber bahan-bahan obat kepada apoteker</i> )	0.080	0.764
9	Patients have the right to obtain halal drug prescriptions from doctors ( <i>Pasien mempunyai hak untuk mendapatkan resep obat halal dari dokter</i> )	0.080	0.675
10	Patients have the right to be asked for their consent when pharmacists hand over drugs that contain illegal substances ( <i>Pasien mempunyai hak untuk diminta persetujuannya apabila apoteker menyerahkan obat yang mengandung bahan haram</i> )	0.080	0.634

Table III shows the results of the data processing validation questionnaires on public beliefs about drugs and the Pearson Product Moment correlation test used to determine the degree of relationship and contribution of the independent variable (belief statement) with the dependent variable (public belief). The coefficient value indicates the relationship; if the coefficient value is 0, it means there is no relationship at all, whereas if the coefficient value is 1, then the relationship is perfect. Table III shows the results of calculating the correlation coefficient of public perception of halal drugs using the method Pearson Product Moment the results of all  $r$  count  $> r$  table ( $0.471-0.764 > 0.080$ ) it can be concluded that there is a correlation between the respondent's statements and the total score, thus it can be interpreted that all statements about public perceptions of halal drugs are valid.

In addition to the question about halal certification of drugs being the responsibility of the government, all questions about public perception of halal drugs have a high degree of attachment (Normasilla Hakim and Sugihantoro, 2022). This shows that the public strongly believes that halal certificates are the responsibility of the government.

**Table IV. Results of the Questionnaire Validity Test on Public Attitudes About Halal Medicines**

NO	QUESTION	Results
----	----------	---------

		<b>R Table</b>	<b>R-Value</b>
1	I have been looking for information about the halalness of a product that I'm going to consume ( <i>Saya telah mencari tahu informasi tentang kehalalan suatu produk yang akan saya konsumsi</i> )	0.080	0.749
2	Every time I consume a product, I make sure that the product is halal ( <i>Setiap akan mengkonsumsi sebuah produk, saya telah pastikan bahwa produk itu adalah halal</i> )	0.080	0.753
3	I have asked for information regarding the halalness of the medicine prescribed by the doctor ( <i>Saya telah meminta informasi mengenai kehalalan obat yang diresepkan oleh dokter</i> )	0.080	0.693
4	I have asked the doctor to prescribe halal medicine for me ( <i>Saya telah meminta dokter meresepkan obat halal untuk saya</i> )	0.080	0.699
5	I have asked the pharmacist for information regarding the halalness of the medicine prescribed by the doctor ( <i>Saya telah meminta informasi mengenai kehalalan obat yang diresepkan oleh dokter kepada apoteker</i> )	0.080	0.688
6	I have purchased over-the-counter drugs with the halal logo ( <i>Saya telah membeli obat bebas yang berlogo halal</i> )	0.080	0.661
7	I feel happy if the pharmacist provides information regarding the halal status of the drugs I receive ( <i>Saya merasa senang jika apoteker memberikan informasi mengenai status kehalalan obat yang saya terima</i> )	0.080	0.757
8	I am happy with the Government's policy for drug manufacturers to put the "halal" logo on halal medicines ( <i>Saya merasa senang kebijakan Pemerintah agar produsen obat mencantumkan logo "halal" pada obat halal</i> )	0.080	0.250
9	I follow the MUI fatwa that allows the use of illegal drugs in emergencies ( <i>Saya mengikuti fatwa MUI yang membolehkan pemakaian obat haram dalam keadaan darurat</i> )	0.080	0,598

**Table IV.** shows that the results of calculating the correlation coefficient of people's attitudes towards halal drugs use the method Pearson Product Moment the results of all  $r$  count  $> r$  table ( $0.250-0.757 > 0.080$ ) it can be concluded that there is a correlation between the respondent's statements and the total score, thus it can be interpreted that all statements about people's attitudes towards halal drugs are valid. The question "I am happy with the Government's policy for drug manufacturers to put the "halal" logo on halal medicines" is the most approved attitude of society (ArismanUtama and Jaya, 2017).

#### 4. Questionnaire Reliability Test

A reliability test on a research instrument is used to determine whether a questionnaire used in collecting research data can be said to be dependable. A reliability test was conducted using Cronbach's alpha. If a variable shows a value Alpha Cronbach



> 0.60, it can be concluded that these variables can be said to be dependable or consistent in measuring.

**Table V. Value Cronbach Alpha Questionnaire of Knowledge, Perceptions, and Public Attitudes Towards Halal Medicines**

Domain	Cronbach alpha value
Knowledge	0.730
Perception	0.756
Attitude	0.723

Table V. shows the results of the reliability test of the knowledge questionnaire, beliefs, and attitudes of the community towards halal drug use analysis Alpha Cronbach value is obtained Alpha Cronbach > 0,6 means that the questionnaire on knowledge, beliefs, and attitudes of the community towards halal medicines is dependable. All domains had Cronbach's alpha > 0.7, indicating that all domains had sufficient reliability (Jumailiyah, 2017).

## CONCLUSION

In conclusion, the questionnaire on the community's knowledge, perceptions, and attitudes toward halal medicines met the valid and reliable criteria.

## Limitation of Study

This research is limited to Indonesia's territory and the law's enactment of halal product guarantees.

## ACKNOWLEDGMENT

The authors would like to thank the Ministry of Education, Culture, Research, and Technology for providing grants to carry out this research through the scheme of Doctoral Research Grant 2022, with ref number 005/PB. PDD/BRIn.LPPM/VI/2022 to the YPIB University Faculty of Pharmacy, which provided educational scholarships. this Doctoral program.

## REFERENCES

- Abduh, M. *et al.* (2017) 'Larangan Menggunakan Barang Haram Sebagai Obat', *Muhammad Abduh / 21 TAHDIS*, 8, pp. 21–31.
- Ali, M. (2016) 'Konsep Makanan Halal dalam Tinjauan Syariah dan Tanggung Jawab Produk Atas Produsen Industri Halal', *AHKAM: Jurnal Ilmu Syariah*, 16(2), pp. 291–306. doi: 10.15408/ajis.v16i2.4459.
- Arisman Utama, I. and Jaya, R. K. (2017) 'Survei "Confidence Level" Konsumen Terhadap Produk Halal di Jakarta', *Repository.Uai.Ac.Id*.
- Asyifa, S. A. and Semiarty, R. (2023) 'Development of A Questionnaire To Assess Covid-19 Prevention Behavior of Clinical Clerkship Student in Faculty', pp. 375–383.
- Aurelia Fitria N; Dr. Sukamdi, M.Sc.; Dr. Sudrajat, M. P. (2021) 'Profil Angkatan Kerja Remaja Di Wilayah Jawa'.
- Badan Pusat Statistik (2023) *Statistik Indonesia 2022*, *Statistik Indonesia 2022*. Available at: <https://www.bps.go.id/publication/2020/04/29/e9011b3155d45d70823c141f/statistik-indonesia-2020.html>.
- Bintan Dzumirroh Ariny, N. (2020) 'Dampak positif Undang-Undang nomor 33 tahun 2014 tentang jaminan produk halal dalam menciptakan sistem jaminan produk halal di Indonesia', *Syarie : Jurnal Pemikiran Ekonomi Islam*, 3(2), pp. 198–218.
- Dewi, S. K. and Sudaryanto, A. (2020) 'Validitas dan Reliabilitas Kuesioner Pengetahuan, Sikap dan Perilaku Pencegahan Demam Berdarah', *Seminar Nasional Keperawatan Universitas Muhammadiyah Surakarta (SEMNASKEP) 2020*, pp. 73–79.
- Fatmasari, Y. (2017) 'Pengaruh Pendidikan, PDRB dan Pengangguran Terhadap Kemiskinan

- Di Jawa Timur Tahun 2006-2015', p. 115.
- Hijriawati, M., Putriana, N. A. and Husni, P. (2018) 'Upaya Farmasis Dalam Implementasi Uu No. 33 Tahun 2014 Tentang Jaminan Produk Halal', *Farmaka*, 16(1), pp. 127–132.
- Jumailiyah (2017) 'Pengaruh Kualitas Item Terhadap Realibilitas Alpha', *Jurnal Ilmiah IKIP Mataram*, 4(1), pp. 18–24.
- Kamal, M. A. M. (2017) 'Kontekstualisasi Makna Thoyyib dalam Al-Qur'an dan Implementasinya terhadap Kriteria Sertifikasi halal MUI', *FSH UNSIQ Proceeding*, I, pp. 153–172. Available at: <https://ojs.unsiq.ac.id/index.php/pfsh/article/view/74>.
- Kementerian Sekretariat Negara RI (2021) *Peraturan Pemerintah RI Nomor 39 Tahun 2021 Tentang Penyelenggaraan Bidang Jaminan Produk Halal*.
- Kurniawati, D. and Sumarji (2018) 'Pengaruh Pengetahuan, Persepsi, Sikap, dan Norma Subyektif Terhadap Perilaku Konsumen Muslim Dalam Konsumsi Produk Pangan Halal Di Kabupaten Nganjuk', *Jurnal Agribisnis*, 18(1), pp. 49–52.
- Kurniawati, K. D., Kusumawati, A. and Prambamurti, P. N. (2020) 'Hubungan Pengetahuan, Persepsi Keseriusan, Persepsi Hambatan dan Efikasi Diri dengan Partisipasi Remaja Dalam Mengikuti Posyandu Remaja', *JURNAL KESEHATAN MASYARAKAT (e-Journal)*, 8(3), pp. 406–409.
- Marfuah, S. N. A. L. (2020) 'Tubuh Sehat Dengan Makanan Bergizi Sesuai Ajaran Islam', *Fakultas Kedokteran Universitas Islam Indonesia*, (Tubuh Sehat Dengan Makanan Bergizi Sesuai Ajaran Islam), pp. 1–4. Available at: <https://fk.uui.ac.id/tubuh-sehat-dengan-makanan-bergizi-sesuai-ajaran-islam/>.
- Muhammad Galib (2015) 'An Islamic Perspective on Halal Food and Pharmaceutical Products', *Tafsire*, 3(2), pp. 90–102.
- Normasilla, N. S., Hakim, A. and Sugihantoro, H. (2022) 'Pengetahuan, Persepsi, dan Sikap Masyarakat Muslim di Kabupaten Magetan Terhadap Obat Halal', *Journal of Islamic Pharmacy*, 7(1), p. 24. doi: 10.18860/jip.v7i1.14739.
- Nurazizah, E. O., Ermatita, E. and Astriratma, R. (2021) 'Analisis Pengukuran Usability Menggunakan Metode Use Questionnaire Pada Aplikasi Shopee Indonesia', *Senamika*, (September), pp. 688–697. Available at: <https://conference.upnvj.ac.id/index.php/senamika/article/view/1629%0Ahttps://conference.upnvj.ac.id/index.php/senamika/article/download/1629/1391>.
- Ogren, M. *et al.* (2020) 'Model of goal directed behavior for limiting Latino preschoolers' television viewing: Validity and reliability', *BMC Public Health*, 20(1), pp. 1–10. doi: 10.1186/s12889-020-8268-x.
- Raden Andriani Lestari (2014) 'Pengaruh Kepemimpinan Partisipatif Dan Komitmen Organisasi Terhadap Efektifitas Implementasi Rencana Strategik Pada Madrasah Aliyah Di Kabupaten Sukabumi Jawa Barat Universitas Pendidikan Indonesia | repository.upi.edu | per', pp. 66–90.
- Rahayu, S. and Chen, H.-M. (2020) 'Penerjemahan Dan Validasi Kuesioner "Educational Needs of Caregivers Instrument" Ke Dalam Bahasa Indonesia Pada Caregivers Pasien Gagal Jantung', *Jurnal Kesehatan*, 13(1), pp. 35–45. doi: 10.23917/jk.v13i1.11099.
- Rahem, A., Effendi, M. H. and Faridah, H. D. (2021) 'Analysis of pharmacists' knowledge and attitude in the pharmaceutical industry of halal certification and their readiness to produce halal medicine', *Pharmacy Education*, 21(2), pp. 1–7. doi: 10.46542/pe.2021.212.17.
- Ramadhanti, C. (2021) 'Pengetahuan, Persepsi dan Sikap Masyarakat Terhadap Obat Halal di Kecamatan Rogojampi Kabupaten Banyuwangi'.
- Ridwan, M., Syukri, A. and Badarussyamsi, B. (2021) 'Studi Analisis Tentang Makna Pengetahuan Dan Ilmu Pengetahuan Serta Jenis Dan Sumbernya', *Jurnal Geuthèè: Penelitian Multidisiplin*, 4(1), p. 31. doi: 10.52626/jg.v4i1.96.
- Rusmita, S. A. *et al.* (2020) 'Islamic Economic Students Knowledge and Attitude Toward Halal Pharmacy Product in East Java, Indonesia', *al-Uqud: Journal of Islamic Economics*, 5(1), pp. 1–15. doi: 10.26740/al-uqud.v5n1.p1-15.
- Sadeeqa, S. *et al.* (2013) 'Knowledge, Attitude and Perception Regrading Halal

- Pharmaceuticals among General Public in Malaysia', *Archives of Pharmacy Practice*, 4(4), p. 139. doi: 10.4103/2045-080x.123209.
- Sadeeqa, S. (2015) 'Halal Pharmaceutical: Knowledge, Attitude and Perception Among Doctors, Pharmacists, Academicians and Public in Malaysia'.
- Sadeeqa, S. *et al.* (2015) 'KAP Among Doctors Working in Hospitals, Regarding Halal Pharmaceuticals; A Cross Sectional Assessment', *Acta Poloniae Pharmaceutica*, 72(3), pp. 615–624.
- Sarrieff, A. and Abdul Razzaq, H. A. (2013) 'Exploring the halal status of cardiovascular, endocrine, and respiratory group of medications.', *The Malaysian journal of medical sciences : MJMS*, 20(1), pp. 69–75.
- Sarwat, A. (2017) *Halal atau Haram? : Kejelasan Menuju Keberkahan*. 2nd edn. Edited by R. Tri. Jakarta: Gramedia Pustaka Utama,.
- Setyaningsih, R. P. (2022) 'Isu Halal Internasional dan Regional', *Jurnal Kajian Wilayah*, 12(1), p. 121. doi: 10.14203/jkw.v12i1.869.
- Syahrir, A., Rahem, A. and Prayoga, A. (2019) 'Pharmacist Behavior of Halal Labelization on Pharmaceutical Product', *Journal of Halal Product and Research*, 2(1), p. 25. doi: 10.20473/jhpr.vol.2-issue.1.25-32.
- The, D. and Economy, I. (2019) 'State of the Global Islamic Economy Report', *State Of The Global Islamic Economy Report*, 20, pp. 1–178.
- Tushar Saha, Tashnuva Rifat and Shimanto, S. (2019) 'Prospects of Halal Pharmaceuticals Asian Journal of Ethnopharmacology and Medicinal Foods Prospects of Halal Pharmaceuticals', *Asian Journal of Ethnopharmacology and Medical Foods*, 5(2), pp. 17–23. Available at: [https://www.mendeley.com/catalogue/fcf45a72-d17f-3690-82fb-e95041e74dc0/?utm\\_source=desktop&utm\\_medium=1.19.8&utm\\_campaign=open\\_catalog&userDocumentId=%7Bc1f95411-7877-49fb-9fbd-9f62a9aff717%7D](https://www.mendeley.com/catalogue/fcf45a72-d17f-3690-82fb-e95041e74dc0/?utm_source=desktop&utm_medium=1.19.8&utm_campaign=open_catalog&userDocumentId=%7Bc1f95411-7877-49fb-9fbd-9f62a9aff717%7D).
- Yenti, E. (2018) 'Berobat Dengan Benda Haram Dalam Perspektif Islam', *Al Irsyad : Jurnal Bimbingan Konseling Islam*, 1(2), pp. 137–144. Available at: <https://ejournal.uinib.ac.id/jurnal/index.php/alirsyad/article/view/139>.
- Yusup, F. (2018) 'Uji Validitas dan Reliabilitas Instrumen Penelitian Kuantitatif', *Jurnal Ilmiah Kependidikan*, 7(1), pp. 17–23. doi: 10.21831/jorpres.v13i1.12884.
- Zia, K. C. (2021) 'Tingkat Pengetahuan, Persepsi, dan Sikap Tenaga Kefarmasian Terhadap Penggunaan Obat Halal di Apotek Kota Pasuruan', *Etheses.Uin*, p. 148.

