The effect of providing educational videos on the level of knowledge and attitudes of the Batu City community regarding the use of halal-labeled medicines

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ABSTRACT

Indonesia is the country with the largest Muslim population in the world. For a Muslim, consuming halal products is a necessity and obligation as a form of faith in Allah SWT. However, the awareness of the Muslim community in paying attention to the halalness of medicinal products still needs to be increased. Education regarding halal-labeled medicines is an effort that can be made to increase public knowledge about halal-labeled medicines. Increasing a person's knowledge can form a positive attitude so that public awareness about the importance of halal-labeled medicines can increase. This research aims to find out whether providing educational videos affects the level of knowledge and attitudes of the people of Batu City regarding the use of halal-labeled medicines. This research is a pre-experimental quantitative research with a one-group pretest-posttest design. The research sample was taken using a purposive sampling technique, and the number of research respondents was 100. The results of the research on the normality test showed that the data on the knowledge and attitude variables were not normally distributed, so the Wilcoxon test was carried out, which showed that there were differences in the level of knowledge and attitudes of respondents before and after being given the educational video with a significance value (p-value < 0.05). This research concludes that providing educational videos influences the knowledge and attitudes of the people of Batu City regarding halal-labeled medicines.

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INTRODUCTION

Indonesia has the largest Muslim population in the world. As of December 31, 2021, there were 237.53 million Muslims living in Indonesia, according to figures from the Ministry of Home Affairs. This figure corresponds to 86.9% of the 273.32 million people that live in the nation. In June 2021, there were 39.85 million Muslims living in East Java, or 97.21% of the entire population, according

to figures from the Ministry of Home Affairs' Directorate General of Population and Civil Registration.

Medicines are substances or mixtures of substances, including biological products, that are used to study or alter physiological systems or pathological states for the purposes of human contraception, diagnosis, prevention, healing, and recovery (Permenkes RI, 2016). Medicines to improve health quality are not enough to guarantee safety, quality, and efficacy; halal guarantees must also be provided (Syahrir et al., 2019). The government ought to ensure that halal medicine products are available as a means of safeguarding customers. The government's dedication in upholding consumer rights, particularly those of Muslim consumers, is demonstrated by the presence of Law Number 33 of 2014 concerning Halal Product Guarantee (Maulina et al., 2022).

Currently, it is more difficult for people to get medicines with a halal logo than food/drinks with a halal logo because the number of medicines that are halal certified is still tiny compared to food/drinks with a halal logo (Hakim et al., 2022). According to data held by the Indonesian Ulema Council's Food, Drug and Cosmetics Study Institute (LPPOM MUI), only around 25.7% of all pharmaceutical companies in Indonesia have halal certificates for their products, meaning there are only 53 companies that have to undergo the halal certification process until October 2019. Meanwhile, as of March 2021, the number of medicines (drugs and vaccines) certified as halal was 2,586, of which 19,483 were recorded at BPOM (Alfath, 2023). However, the halal industry has now advanced and developed quite rapidly. Although at the beginning of the development of the halal industry the biggest attention was on halal food, it has now spread to other sectors, including medicine and medical devices (Nordin & Radzi, 2021). The lack of halal-certified medicines could be due to the behavior of people who do not need halal medicines. Behavior is linearly related to people's knowledge and attitudes towards halal medicine (Hakim et al., 2022).

According to the findings of earlier study on the Magetan Muslim community by (Normasilla et al., 2021), 61% of the community had a medium level of understanding regarding halal medicine. According to the study done in East Java by (Hakim et al., 2022), respondents' knowledge of halal medication fell into three categories: good (65%), sufficient (30%), and poor (5%). In the meantime, positive attitudes accounted for 70% of respondents' opinions, sufficient attitudes for 29%, and negative attitudes for 1%. Another research regarding public attitudes towards halal medicines conducted by (Ariddah et al., 2023) showed that 64% showed a good attitude towards halal medication, but 36% showed an unfavorable attitude towards halal medicines.

The results of the above study indicate that most people have knowledge and attitudes that still need to be improved towards halal medicines. Without adequate knowledge, people may be less able to make informed decisions regarding the consumption of halal medicines. Education regarding halal-labeled medicines is an effort that can be made to increase public awareness regarding the importance of using halal-labeled medicines. Education can convey material about halal-labeled medication, so public knowledge and attitudes regarding them will increase. Halal awareness will increase if someone knows enough about halal (Lailaturrohmah et al., 2021).

In previous studies, it focused on certain areas such as Magetan and several areas in East Java. This research was conducted in Batu City, which has not been studied much before. Batu City is an environment that can become a representative research subject. By conducting research in Batu City, the results of this research can reflect situations that may be faced by similar communities in other places. Thus, this research is not only relevant to the religious and social context of Batu City people but can also provide broader insights and contributions related to people's knowledge and attitudes towards halal-labeled medicines in various Muslim community contexts.

While there are studies that have assessed people's knowledge and attitudes towards halal medicines, few have examined how educational interventions can actually change people's

attitudes and behaviors. This study focuses on how educational videos can improve people's knowledge and attitudes about using halal medicines. The increasingly rapid development of technology has also made it easier to convey information and education, which can be disseminated via social media through images, audio, and video (Maulina et al., 2023). This research uses audio-visual-based educational videos as a medium to convey information to make it more transparent and exciting and to help respondents understand the material presented more quickly. This is a relatively new approach compared to the seminar or live discussion methods.

RESEARCH METHOD

This research is pre-experimental. A group pretest-posttest design was employed in the study. The population in this study was the people of Batu City, which had 216,735 residents with a Muslim population of 208,741. The number of research samples was calculated using the Slovin Formula, and a sample of 100 respondents was obtained. Non-probability sampling with a purposeful sampling approach was the sample technique employed, where the researcher purposively selects individuals who meet the inclusion and exclusion criteria. This approach allows the researcher to focus on subgroups that are most relevant to the research objectives. Inclusion criteria include the Muslim community of Batu City and those aged between 26 and 55 years. Then, the exclusion criteria include individuals who are not willing to participate in filling out the questionnaire and individuals who fall into the category of disabled people.

The Muslim community of Batu City was selected because awareness of knowledge and attitudes towards halal-labeled medicines is highly relevant to the Muslim community. The age of 26-55 years represents a group that is usually involved in health-related decision-making and has a higher potential to receive and utilize information from educational videos or other digital media. Based on the explanation of the inclusion criteria, the study can demonstrate that the selected sample has direct relevance to the research objectives. The characteristics of the selected sample can be considered representative of the wider population in the context of comparable Muslim communities, so the results of the study can provide useful insights for Muslim communities in other cities that have similar socio-cultural conditions.

The research instrument used was a questionnaire. Validity and reliability tests were carried out on the questionnaire before the questionnaire was used to collect research data. The validity test determines how much an instrument accurately measures what it wants to measure. Meanwhile, the reliability test determines the importance of the questionnaire's consistency and whether the results remain the same or differ if used to collect data at various times and places afterward (Darma, 2021). The data used for the reliability test is data that has been declared valid in the validity test that has been carried out previously. Prior to distributing the questionnaires for validity and reliability testing, the questionnaires were reviewed by experts in pharmacy, health, and social research to ensure all important aspects were covered and each item was relevant to the topic under study. Then the questionnaire was piloted on a small group outside the target population to ensure the questions were well understood and appropriate to the local context. Validity and reliability testing in this research was conducted on 30 communities outside the Batu City community, which will be used as research samples. After data collection, statistical analysis was conducted to test validity and reliability according to the pre-planned method.

Data Analysis

To ascertain whether the research data has a normal distribution, it will be tested using the normality test assumption. The Liliefors Test technique with Kolmogorov-Smirnov is a commonly used normalcy test. If the significant value ($P>0.05$) is greater than 0.05, the data is regularly distributed. On the other hand, the data is considered non-normally distributed if the significant value is less than 0.05 ($P<0.05$) (Pramono et al., 2021).

If the Kolmogorov-Smirnov normality test findings indicate that the data used as a sample in this study are not normally distributed, the Wilcoxon Signed Ranks test is utilized as an alternative to the Paired Sample T-test. The Wilcoxon Signed Ranks test compares two observations, one before and one after a given treatment, in order to assess different treatments. The decision-making criteria for the Wilcoxon Test are the same as the Paired Sample T-Test, namely, if the significance value is < 0.05, then Ha is accepted (there is a difference), conversely if the significance value is > 0.05, then Ha is rejected (there is no difference) (Astuti et al., 2021).

The study findings obtained from the questionnaire as primary data will be given in tabular form at the time of data interpretation and then explained. The research data will be analyzed based on the theory that forms the basis of the research and will be compared with findings from previous studies to see consistency or differences. After developing findings from the data set obtained, conclusions will be drawn regarding the effectiveness of educational videos in increasing public knowledge and attitudes towards halal-labeled medicines. These results will form the basis of recommendations for further action, both on a research scale and the implementation of a broader educational program.

RESULTS AND DISCUSSIONS

Respondent Characteristics

The frequency distribution data of the characteristics of research respondents include gender, age, address, latest education and occupation as shown in the table that follows:

Tabel 1. Frequency distribution of respondents' characteristics (n=100 people)

No.	Respondent Characteristics	F	%
1.	Gender		
	Male	11	11%
	Female	89	89%
2.	Age		
	Early Adulthood (26-35 years old)	13	13%
	Late Adults (36-45 years old)	48	48%
	Early Elderly (46-55 years old)	39	39%
3.	Address		
	Batu Sub-district	45	45%
	Bumiaji Sub-district	29	29%
	Junrejo Sub-district	26	26%
4.	Education		
	Elementary School	12	12%
	Junior High School	15	15%
	Senior High School	53	53%
	Academic (D1/D2/D3/D4)	5	5%
	University (S1/S2/S3)	15	15%
5.	Occupation		
	Housewive	77	77%
	Self-employed	7	7%
	Private employee	8	8%
	Others	8	8%

Based on this table, it can be seen that the majority of respondents in this study were women, namely 89% (89 people). Women are considered more sensitive and play an essential role in making decisions regarding health in the family, including choosing which medicine to use when one of the family members experiences a health problem (Permatananda et al., 2020). Then, the majority of respondents were in the age range of 36-45 years (late adulthood). Namely, 48% (48 people) and the respondents' last education was high school/equivalent, 53% (53 people). When treated according to medical regulations, more mature people tend to be able to think more rationally. Understanding and receiving information also increases with age (Widyaningrum et al.,

2023). Apart from that, an individual's reaction to anything that comes from the outside will also depend on their educational background. Individuals with higher levels of education will process new information more logically and consider the potential benefits of the concept (Herayjat, 2022).

The majority of respondents' work in this study was as housewives. The household is the smallest unit of community life that needs information related to drug use. One member of the household who has a vital role, so it is recommended to know information related to drug use, is the mother. A mother who can manage medication in her home appropriately will help indirectly improve the quality of public health. A mother is the primary key to the quality of a family's health because it is generally considered to be more dated in determining which medicine to use when her family is sick (Setiawan & Utama, 2022).

Questionnaire Validity Test

The table below shows the results of the validity test of 15 question/statement items on the knowledge and attitude variables:

Tabel 2. Questionnaire validity test results

		Score		Description
		r_{count}	r_{table}	
Knowladge Variable	P1	0,557	0,361	Valid
	P2	0,629	0,361	Valid
	P3	0,777	0,361	Valid
	P4	0,638	0,361	Valid
	P5	0,590	0,361	Valid
	P6	0,504	0,361	Valid
	P7	0,536	0,361	Valid
	P8	0,619	0,361	Valid
	P9	0,562	0,361	Valid
	P10	0,626	0,361	Valid
	P11	0,566	0,361	Valid
	P12	0,683	0,361	Valid
	P13	0,638	0,361	Valid
	P14	0,500	0,361	Valid
	P15	0,557	0,361	Valid
	S1	0,616	0,361	Valid
	S2	0,607	0,361	Valid
Attitude Variable	S3	0,674	0,361	Valid
	S4	0,660	0,361	Valid
	S5	0,737	0,361	Valid

The validity decision-making method in this research uses the correlation value method. This method compares the correlation value (calculated r) with the table r value. Based on the Product Moment correlation coefficient table where a pretest was carried out with a total of n=30 with a significance level of α=5% or 0.05, the r table is 0.361 (Siagian et al., 2023). So, the instrument can be considered valid if the calculated r-value is more significant than 0.361. If the computed r value is smaller than 0.361, then the instrument can be said to be invalid (Utami, 2023). Based on data from the results of testing the validity of the knowledge and attitude variable questionnaire, all statement/question items are declared valid because the calculated r-value is more than 0.361.

Questionnaire Reliability Test

The table below is the result of the questionnaire reliability test that has been carried out:

Tabel 3. Questionnaire reliability test result

No.	Variable	Cronbach's Alpha	a Decisions	Description
1.	Knowladge	0,749	> 0,6	Reliabel
2.	Attitude	0,751	> 0,6	Reliabel

Decision-making for reliability testing is done by comparing Cronbach's Alpha values. If Cronbach's Alpha value is 0.6, all the instruments in this variable are reliable. Conversely, if the Cronbach's Alpha value <0.6, then the instrument on that variable is not reliable (Anggraini et al., 2022). Based on the results of the reliability test's output value for the knowledge and attitude variables in Table 4, Cronbach's Alpha value for the knowledge variable was 0.749, and for the attitude variable, it was 0.751, so the instruments for the knowledge and attitude variables are declared reliable.

Knowledge of Batu City People About the Use of Halal Labeled Medicines

In this study, 15 statement items/questions were in the knowledge variable, measured using the Guttman scale. The answer "Yes" gets a value of 1, and the answer "No" gets 0. The formula used to measure the percentage of categorization of the pretest and posttest knowledge answers obtained from the questionnaire is:

$$\text{Percentage (\%)} = \frac{Total\ Correct\ Score}{Total\ Maximum\ Score} \times 100\%.$$

Based on these calculations, knowledge results were obtained which were included in the good, sufficient and poor categories in the following table:

Tabel 4. Respondent knowladge categorization results

Conditions	Knowladge Category							
	Good (≥ 76-100 %)		Simply (56–75 %)		Lacking (≤ 55 %)		Not Good (< 40%)	
	n	%	n	%	n	%	n	%
Before Education	58	58	40	40	2	2	0	0
After Educations	96	96	4	4	0	0	0	0

Knowledge is obtained through providing information to individuals or groups. According to (Ichsan et al., 2021), providing information through educational videos can influence a person's senses and increase people's knowledge. From this table, the majority of respondents' knowledge about halal medicine before providing the educational video was in a good category, with 58% of respondents. Then, after being given an educational video, the majority of respondents' knowledge level was in the good category, 96% of respondents. These results are supported by research conducted by (Noviyanto et al., 2023), public knowledge about halal medicine was mainly in the very good category at 81% and 19% in the good knowledge category.

Attitudes of the Batu City Community Regarding the Use of Halal Labeled Medicines

The attitude variable in this study consisted of five statement items. The answers were scored on a Likert scale: Strongly Agree received a score of 4, Agree received a score of 3, Disagree received a score of 2, and Strongly Disagree received a score of 1. At the respondents' attitude level, the highest score was worth "20" and the lowest was "5". Then, the scores will be grouped into four categories: very positive, positive, negative, and very negative. The calculation of the attitude categorization formula is as follows:

$$\text{Interval} = \frac{Range}{K}$$

Based on these attitude categories, the results of respondents' attitude answers were obtained, which were included in the categories of very positive attitudes, positive attitudes, negative attitudes, and very negative attitudes in the following table:

Tabel 5. Respondent attitude categorization results

Conditions	Attitude Category							
	Strongly Positive (16,26-20)		Positive (12,51-16,25)		Negative (8,76-12,5)		Strongly Negative (5-8,75)	
	n	%	n	%	n	%	n	%
Before Education	70	70	27	27	3	3	0	0
After Educations	84	84	16	16	0	0	0	0

The respondent's attitude can be influenced by the respondent's knowledge (Nugrahaeni, 2023). The higher or better the respondent's knowledge, the more positive the public's attitude will be regarding halal-labeled medicines. In this study, respondents' knowledge level before being given the educational video was mostly in the good category, so the majority of respondents' attitudes before being given the educational video were also in the positive attitude category.

From the table above, most respondents' attitudes regarding halal-labeled medicines before providing the educational video were very positive, amounting to 70% of respondents. Then, after being given an educational video, the majority of respondents' attitudes in the very positive attitude category were 84% of respondents, and no respondents had a negative attitude towards halal-labeled medicines. This proves that education can improve people's attitudes very positively. This statement is by research conducted by (Putri et al., 2022), which states that providing education through video media can improve a person's attitude.

Normality Test

The following is a table of the results of the normality tests that have been carried out:

Tabel 6. Normality test results

No	Variable		Significance Score (Asym.Sig)	Description
1.	Knowladge	Pretest	0,001	Abnormal
		Posttest	0,000	Abnormal
2.	Attitude	Pretest	0,002	Abnormal
		Posttest	0,000	Abnormal

Based on the normality test results, it can be concluded that the pretest and posttest data on the knowledge and attitude variables are not normally distributed, so the hypothesis test carried out next uses the non-parametric Wilcoxon test. The following table presents an analysis of differences in respondents' knowledge and attitude scores before and after being given the educational video using the Wilcoxon test:

Tabel 7. Wilcoxon test results

No	Variable	Significance Score (Asymp.Sig 2-tailed)	Description
1.	Knowladge	0,000	There is a difference
2.	Attitude	0,000	There is a difference

Analysis of the Wilcoxon test results produces a p-value of 0.000. This shows a significant influence before and after providing educational videos on the level of knowledge and attitudes of the people of Batu City regarding the use of halal-labeled medicines. This is supported by research conducted by ((Octaviana & Ramadhani, 2021) show that providing education via video can significantly increase a person's knowledge. Video educational media is also an appropriate intervention in increasing public knowledge in various age groups (Aisah et al., 2021).

CONCLUSION

According to the findings of the completed data analysis, it was concluded that providing educational videos increased the knowledge and attitudes of Batu City's people regarding halal-labeled medicines. This study was limited to the Batu city community and used audio-visual-based videos as an educational method. The effectiveness of videos may differ compared to other educational methods, such as in-person discussions or seminars. Responses to educational videos may also vary based on each individual's level of understanding and media preferences. The focus of this study was on knowledge and attitudes. Future researchers can explore the effect of other

educational methods on knowledge and attitude and examine the effect of education on overt responses such as community behavior regarding the use of halal-labeled medicines. Research can also be conducted on people outside Batu City who have never received education related to halal-labeled medicines.

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