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Original Article

The Relationship Between Education Level and Public Knowledge of DAGUSIBU in RW 02, Rambutan Village, East Jakarta

Hubungan antara Tingkat Pendidikan dan Tingkat Pengetahuan Masyarakat mengenai Dagusibu (Dapatkan, Gunakan, Simpan, Buang) di RW 02, Kelurahan Rambutan, Jakarta Timur

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Abstract

DAGUSIBU knowledge itself can be obtained from various sources, one of which is education, where the higher a person's education, the higher the level of expertise they have. This study aimed to the relationship between education level and public knowledge level regarding DAGUSIBU in RW 02, Rambutan Village, East Jakarta.
The population in this study was the entire community in RW 02, Rambutan Village, East Jakarta. The sample was calculated using the Slovin formula. The sampling technique used a simple random sampling approach. The data obtained were analyzed with SPSS with the Chi-Square method. If the *p*-value is less than 0.05, it is judged as "significant," and if the *p*-value is greater than 0.05, it is judged as "not significant. Before distributing the questionnaire, the questionnaire was tested through validity and reliability testing. Hypothesis: There is a significant positive impact of education level on a level of knowledge regarding DAGUSIBU (Get, Use, Save, Dispose).
The results showed that the level of knowledge regarding DAGUSIBU in RW 02, Rambutan Village, was good for 20.9% of respondents, poor for 30.7% of respondents, while 48.4% possessed adequate knowledge. There was a significant correlation between education level and public knowledge about DAGUSIBU, with a p-value of 0.05. It can be concluded that the higher education level was associated with higher knowledge about the correct use of medication. Therefore, public education about DAGUSIBU is crucial to reduce the risk of medication errors

Abstrak

Pengetahuan mengenai DAGUSIBU dapat diperoleh dari berbagai sumber, salah satunya adalah pendidikan; semakin tinggi tingkat pendidikan seseorang, semakin tinggi pula tingkat keahlian yang dimilikinya. Penelitian ini bertujuan untuk mengetahui hubungan antara tingkat pendidikan dan tingkat pengetahuan masyarakat mengenai DAGUSIBU di RW 02, Kelurahan Rambutan, Jakarta Timur.
Populasi dalam penelitian ini adalah seluruh warga di RW 02, Kelurahan Rambutan, Jakarta Timur. Ukuran sampel dihitung menggunakan rumus Slovin, dan teknik pengambilan sampel yang digunakan adalah simple random sampling. Data yang diperoleh dianalisis menggunakan perangkat lunak IBM SPSS Statistic Version 22 dengan metode *Chi-Square*.
Hasil dinyatakan "signifikan" jika nilai p kurang dari 0,05, dan "tidak signifikan" jika nilai p lebih dari 0,05. Sebelum disebarkan, kuesioner telah melalui uji validitas dan reliabilitas. Hipotesis penelitian menyatakan bahwa terdapat pengaruh positif yang signifikan dari tingkat pendidikan terhadap tingkat pengetahuan mengenai

DAGUSIBU (Dapatkan, Gunakan, Simpan, Buang). Hasil penelitian menunjukkan bahwa tingkat pengetahuan mengenai DAGUSIBU di RW 02, Kelurahan Rambutan, tergolong baik 20.9% responden, kurang pada 30,7% responden, sementara 48,4% responden memiliki pengetahuan yang cukup Terdapat korelasi yang signifikan antara tingkat pendidikan dan pengetahuan masyarakat mengenai DAGUSIBU, dengan nilai p sebesar 0,05. Dapat disimpulkan bahwa tingkat pendidikan yang lebih tinggi berkaitan dengan pengetahuan yang lebih baik mengenai penggunaan obat yang tepat. Oleh karena itu, edukasi masyarakat mengenai DAGUSIBU sangat penting untuk mengurangi risiko kesalahan penggunaan obat

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INTRODUCTION

DAGUSIBU (Get, Use, Save, Dispose) is an educational program initiated by the Indonesian Pharmacists Association to enhance public literacy regarding the safe use of medicines. In Indonesia, the implementation of DAGUSIBU is crucial, considering that many people still use medicines without prescriptions, store them improperly, or dispose of expired medicines carelessly, posing risks to both health and the environment. This lack of understanding is influenced by limited access to information, insufficient education in healthcare facilities, and the common habit of sharing medicines among family members or neighbors. The implementation of DAGUSIBU in Indonesia represents a strategic effort to build collective awareness of the importance of rational, safe, and responsible medicine use.[1]

The 2018 Basic Health Research indicates the following breakdown of household perceptions regarding ease of access to hospitals: easy (37.1%), difficult (36.9%), and very difficult (26%).[2] However, Previous research indicates that irrational medication use persists, as evidenced by the inappropriate administration of antibiotics relative to standard therapy.[3] Research conducted in Bandung City—specifically in the Babakan Sari Urban Village—indicates that residents' practices regarding medication storage remain inadequate.[4] Improper medication storage (including storage in humid or hot environments), irrational medication use, and resource wastage can lead to medication misuse.[5]

Based on a quantitative study regarding the baseline knowledge of DAGUSIBU within the Solok Urban Village population in Jambi. Utilizing a sample size of 30 respondents, the study indicated that 20 individuals (66.7%) fell into the poor knowledge category, whereas 10 individuals (33.3%) maintained an adequate understanding. Notably, no respondents exhibited a good level of knowledge, indicating that local pharmaceutical education frameworks require optimization.[6]

Public knowledge regarding medication use is often inadequate, leading to improper practices influenced by advertisements or advice from friends, family, and neighbors. These practices highlight the importance of the "Dagusibu" (Get, Use, Save, Dispose) guidelines, a public health initiative whose awareness is significantly influenced by demographic factors such as age, gender, education, occupation, and income. To evaluate and improve adherence to these guidelines, researchers can administer surveys and questionnaires within the community. Ultimately, assessing and enhancing this public knowledge is essential to ensuring the health, well-being, and overall quality of life of the local population.[7]

Based on the data above, this research aims to determine the relationship between education level and community knowledge regarding DAGUSIBU in Rambutan Village.

METHODS

This DAGUSIBU study employs a cross-sectional design and quantitative method to assess the level of public knowledge regarding the DAGUSIBU program. The tools and materials used in this research include writing instruments and questionnaires; the research materials consist of questions addressing aspects of knowledge concerning the DAGUSIBU program. The respondents were residents of RW 02, Rambutan Village, East Jakarta. Data collection was conducted in May 2025 by distributing questionnaires to 316 respondents. The target population consisted of Rambutan Village residents, specifically focusing on individuals aged 18 to 65 years. This age group was selected to represent the productive population, assuming that minors may lack the cognitive capacity to fully comprehend the DAGUSIBU protocols.[8]

DATA ANALYSIS

Data analysis was carried out in two stages:

1. Instrument Validity and Reliability Testing.

   The research instrument was tested for validity using item validity through the Corrected Item-Total Correlationtechnique in SPSS, where an item is considered valid if the correlation coefficient is significant at the 0.05 level or exceeds the minimum correlation threshold. Subsequently, a reliability test was conducted using the Cronbach's Alphamethod to ensure instrument consistency, where a value of ≥0.7 indicates acceptable reliability, and a value of >0.8 reflects good reliability.[9]

2. Data Analysis

   Quantitative data were collected by distributing questionnaires to respondents. The resulting data were analyzed using IBM SPSS Statistics version 22 , and the quantitative findings were further reinforced through integration with the chi-square method. [10] Levels of knowledge are classified into the categories of good (76–100%), sufficient (56–75%), and poor (<56%).[11]

RESULT AND DISCUSSION

Validity Test Result

The validity test in this study utilized a sample of 20 respondents and 14 questionnaire items. Validity testing was conducted using IBM SPSS Statistic version 22 based on the Pearson Product-Moment method; the calculated value (r-count) was compared against the critical value from the Pearson Product-Moment table (r-table), and the questionnaire was deemed valid if r-count exceeded 0.4438. [12]

Reliability Test Results

The reliability test utilized Cronbach's Alpha; a construct or variable is considered reliable if it yields a Cronbach's Alpha value greater than 0.6, indicating that the instrument used is reliable.[13]

Respondent Characteristics

In this study, the characteristics of respondents examined, related to gender, age, occupation, and education, are shown in Table 1 below:

Table 1. Respondent Characteristics

Variable	Number of Samples (N)	Percentage (%)
Gender		
Male	135	42.7%
Female	181	57.3%
Age		
18-25 years	52	16.5%
26-35 years	81	25.6%
36-45 years	84	26.6%
46-55 years	66	20.9%
56-65 years	33	10.4%
Employment Status		
Civil/private employee	149	47.2%
Entrepreneur	50	15.8%
Housewife	87	27.5%
Student	3	0.9%
Unemployed	27	8.5%
Education		
Elementary School	28	8.9%
Junior High School/Islamic Junior High School	40	12.7%
Senior High School	186	58.9%
University	62	19.6%

Responses to the DAGUSIBU knowledge items are presented in Table 2:

Table 2. Respondents' Knowledge Level about DAGUSIBU Medication

No	Question	Score Answer Value			
		Correct (N)	Correct (%)	Incorrect (N)	Incorrect (%)
1	Do you know the abbreviation DAGUSIBU?	44	13.9	272	86.1
2	Is a Pharmacy the right place to get medication?	306	96.8	10	3.2
3	Should prescription medications from a private doctor be obtained from a pharmacy?	269	85.1	47	14.9
4	Do you pay attention to the expiration date printed on the medication packaging?	261	82.6	55	17.4
5	Do you know that antibiotics should be taken until they are finished?	292	92.4	24	7.6
6	Do you use liquid/solution medication according to the dosage on the spoon?	246	77.8	70	22.2
7	Do you know how to properly store medication at home?	231	73.1	85	26.9
8	Do you store syrup medication in the refrigerator?	143	45.3	173	54.7
9	Do you store liquid/solution medication in its original packaging and tightly closed container?	273	86.4	43	13.6

10	Do you know that exposure to direct sunlight can cause medication to deteriorate?	244	77.2	72	22.8
11	Do you still keep medication that has changed shape, color, or taste?	220	69.6	96	30.4
12	Do you dispose of medication directly without first destroying the medication and packaging?	97	30.7	219	69.3
13	Do you dispose of tablets, capsules, and suppositories by crushing them and burying them in the ground?	43	13.6	273	86.4
14	Do you destroy medication by throwing it directly into the trash?	46	14.6	270	85.4

Research results regarding gender indicate that the majority of respondents were female, totaling 181 individuals (57.3%). This aligns with the findings of Pristiyantoro and Fadillah (2020), who noted that 71.2% (274 individuals) of their total respondents were female. The high proportion of women in the samples of both studies is thought to be linked to traditional gender roles in society, wherein women—or housewives—are often responsible for managing health and meeting the family's medication needs at home. [14] To date, existing literature remains inconclusive regarding the cognitive or knowledge-based disparities between genders. In practice, while females frequently demonstrate higher levels of diligence, meticulousness, and perseverance when executing tasks, these behavioral tendencies do not inherently indicate superior cognitive capacity or higher knowledge levels.[15]

An analysis of respondent characteristics by age reveals that the largest proportion falls within the 36–45 age group, comprising 84 individuals (26.6%). This finding aligns with the study by Pristiyantoro and Fadillah (2020), which was also dominated by respondents in the productive age range (26–45 years). Contextually, the 36–45 age group represents a life stage where individuals often shoulder dual family responsibilities—characteristic of the "sandwich generation"—involving the health management of both children and elderly parents; consequently, they are the group most frequently exposed to, or engaged with, medication management needs (DAGUSIBU)..[14]

Occupational characteristics indicate that the largest number of respondents worked as civil servants or private sector employees, at 149 (47.2%). This aligns with research by Friska, Sylvia, and Milda (2024), which concluded that work is one factor influencing a person's knowledge because working often involves interacting with others. This leads to a better knowledge base, as found in the work of 74.4% of civil servants/private sector employees. [16]

According to the scoring criteria in Notoatmodjo's framework the work environment constitutes a critical determinant of an individual's knowledge, as it provides both direct and indirect experiential learning.[18]

Based on educational characteristics, the highest level of education was high school/vocational high school, with 186 respondents (58.9%). This is inconsistent with research by Pristiyantoro and Fadillah (2023), which found that 184 respondents (47.8%) had higher education (D1-S3).[14] This finding suggests that higher education leads to greater knowledge about how to obtain, use, store, and dispose of medications. One factor that can influence a person's knowledge is their level of education, which is an effort to provide knowledge that leads to positive, binding behavioral changes.[18]

Respondents' Level of Knowledge Regarding DAGUSIBU Medication

This study, using a 14-item questionnaire with 316 respondents, measured their level of knowledge regarding DAGUSIBU. The results are shown in Table 3 below:

Table 3. Level of Knowledge Regarding DAGUSIBU

Knowledge Level	N	%
Good	66	20.9
Sufficient	153	48.4
Poor	97	30.7
Total	316	100

The results show that residents of RW 02, Rambutan Village, had level knowledge of dagusibu with 153 people (48.4%) categorizing it as sufficient. This sufficient level of knowledge indicates that although some residents are familiar with the concept of DAGUSIBU medication, there are still gaps in understanding that need to be improved.

A person's knowledge will influence their behavior in using drugs. Knowledge is the result of knowing, and occurs after a person becomes familiar with a particular object. [19]

Relationship between Respondents' Education Level and Knowledge of DAGUSIBU Medicine

The relationship between education level and community knowledge about DAGUSIBU medicine in RW 02, Rambutan Village, East Jakarta, can be seen in Table 4 below:

Table 4. Relationship between Education Level and Knowledge of DAGUSIBU Medicine

Category Education Level	Knowledge Level DAGUSIBU						Total		P Value
	Good		Sufficient		Poor				
	N	%	N	%	N	%	N	%	
Elementary School	0	0%	4	14.3%	24	85.7%	28	100%	0.000
Junior High School/Islamic Junior High School	0	0%	20	50%	20	50%	40	100%	
Senior High School	21	11.3%	115	61.8%	50	26.9%	186	100%	
University	45	72.6%	14	22.6%	3	4.8%	62	100%	

Table 4 presents the community's level of knowledge based on education: the "good" knowledge category was most prevalent among respondents with a higher education background (45 individuals or 72.6%); the "sufficient" knowledge category was most common among those with a high school or vocational school education (115 individuals or 61.8%); and the "poor" knowledge category was most frequently found among respondents with only an elementary school education (24 individuals or 85.7%). These results are consistent with the theoretical framework proposed by Lukman, which states that a person's breadth of knowledge expands proportionally with their level of education. [20] A person with a higher level of education may possess more medical information and read more about medications compared to someone with a low level of education or no education.[21] Individuals with higher

educational attainment are more likely to possess a comprehensive understanding of medical information and exhibit greater literacy regarding pharmaceutical products compared to those with lower levels of education or no formal education.[22]

The results of this study indicate a relationship between education level and knowledge regarding the DAGUSIBU medication guidelines among residents of RW 02, Rambutan Urban Village, East Jakarta. This bivariate analysis employed the Pearson Chi-square test. The statistical test yielded a p-value of 0.000 (< 0.05), leading to the conclusion that there is a relationship between education and knowledge regarding DAGUSIBU. This indicates that a higher level of education leads to a better quality of life, as higher education fosters good knowledge and contributes to a high-quality life. Therefore, supervision, information dissemination, and public education regarding the DAGUSIBU guidelines for medication management are necessary. Knowledge influences medication-related behavior; thus, by enhancing public knowledge through outreach or education, it is hoped that positive public behavior regarding DAGUSIBU practices will increase. [23,24,25]

LIMITATION

This study has several limitations, including the use of a cross-sectional design, which precludes definitive conclusions regarding cause-and-effect relationships. Furthermore, as sampling was restricted to a specific geographical area, the findings cannot be generalized to a broader population. Future research should expand the sample scope and explore other factors potentially influencing DAGUSIBU knowledge, such as exposure to information media and the frequency of interactions with healthcare professionals.

CONCLUSION

The majority of respondents in this study were female (181 respondents, 57.3%). Most respondents were aged between 36 and 45 years (84 respondents, 26.6%), worked primarily as civil servants or private-sector employees (149 respondents, 47.2%), and held a high school or vocational high school diploma as their highest level of education (186 respondents, 58.9%). Respondents' knowledge regarding DAGUSIBU was classified as "sufficient"; 153 respondents (48.4%) possessed adequate knowledge, while 97 respondents (30.7%) possessed inadequate knowledge. There was a significant correlation between education level and public knowledge of DAGUSIBU (p = 0.000) < 0.05, with higher education levels indicating a higher level of knowledge about DAGUSIBU medicine

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AUTHOR CONTRIBUTION STATEMENT

OKP: Conceptualization, Methodology, Writing – original draft. CSN: Investigation, Data curation, Resources. ADP: Formal analysis, Visualization, Supervision, Writing – review & editing. All authors have read and agreed to the published version of the manuscript.

CONFLICT OF INTEREST DECLARATION

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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