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Analysis of the Level of Public Knowledge about Self-Medicine, Gastritis, in Sharia Pharmacies

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Abstract. *Gastritis is a common gastrointestinal disorder that can lead to serious complications if not properly managed. Self-medication is a widely practiced method for relieving gastritis symptoms, but improper use of medications without adequate knowledge may result in adverse effects. This study aims to assess the public's knowledge and behavior regarding self-medication for gastritis and examine its association with educational background, with a specific focus on the setting of a Sharia-based pharmacy. A descriptive cross-sectional design was used, involving 100 respondents selected through purposive sampling. Data was collected via online questionnaires and analyzed using chi-square tests. The findings show that the majority of respondents were aged 16–24 years and primarily obtained self-medication information from the internet (33%), followed by pharmacists (31%) and family or friends (26%). Despite the expectation that higher education correlates with better knowledge, the analysis showed no statistically significant relationship between education level and knowledge ($p = 0.430$), nor between education and self-medication behavior ($p = 0.085$). Furthermore, 94% of respondents reported never having practiced self-medication for gastritis. These results suggest a disconnect between access to information and actual health behavior. The study highlights the growing reliance on digital health sources and the persistent gap in health literacy, emphasizing the need for more structured and accessible health education to promote safe and responsible self-medication practices in the community, particularly among youth.*

Keywords: *Gastritis self-medication, level of knowledge, education, health behavior, health literacy*

1. Introduction

Gastritis is one of the conditions commonly found in health care facilities, especially in general clinics and internal medicine units. This disorder is also a complaint that is often submitted by the community, both in the adolescent and adult age groups. Gastritis itself is an inflammation that occurs in the mucosal and submucosal layers of the stomach. Clinically, gastritis is characterized by symptoms such as nausea, vomiting, weakness of the body, decreased appetite, and in more severe cases can be accompanied by gastrointestinal bleeding (Jariya, Masyita, & Hardani, 2022; Tiranda & Ningrum, 2021).

According to a review conducted by the *World Health Organization (WHO)* in 2017 on eight countries, it is known that the prevalence of gastritis is quite high in various parts of the world. In the United States, the incidence rate of gastritis reached 47%, followed by India at 43%, China at 31%, Canada at 35%, France at 29.5%, the United Kingdom at 22%, and Japan at 14.5%. In Indonesia itself, the prevalence of gastritis is estimated at 40.8%, with the number of cases reaching around 274,396. Although it is often considered a mild disorder, gastritis is actually an early condition that can develop into a serious disease if not treated properly (Hamzah & Wirasamita, 2025; Maulidya & Purnama, 2025).

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Based on the research of Dimu et al. (2025) about the Overview of the Level of Knowledge and Attitude to Gastritis Self-Medication Behavior in Bello Village, Maulafa District, Kupang City, it can be concluded that even though all respondents in Bello Village conducted self-medication to overcome the symptoms of gastritis, their level of knowledge was still evenly divided between the categories of good, adequate, and poor, which indicates a discrepancy between knowledge and action. This is reinforced by the findings that positive attitudes towards self-medication are also not always based on proper understanding (Adebiyi, 2023b; Karimah & Efendi, 2023). This condition reflects the high public trust in the practice of self-medicine, but at the same time shows the need for more intensive education on the correct and rational use of drugs (Hossain, 2016; Yulianti & Fitri Muazizah, 2024).

Therefore, intervention from health workers and the government in the form of socialization and empowerment of pharmacies as an accurate source of information is very important to prevent the risk of drug abuse (Adebiyi, 2023a). In the study conducted by Kusumawati et al. (2025) the validity and reliability of the instrument were tested on 391 respondents who had met the inclusion criteria. Data analysis was carried out using SPSS software version 23 with the Spearman correlation test method. The results showed that as many as 43.5% of respondents had a high level of knowledge, 36.6% were at a sufficient level of knowledge, and 19.9% had a low level of knowledge (Kifle, Mekuria, Anteneh, & Enyew, 2021).

Meanwhile, in the aspect of self-medication behavior, 60.1% of respondents showed good behavior, 39.9% showed moderate behavior, and no respondents were found with bad behavior (Luan, Alakhali, Keshavarzi, & Fatokun, 2020; Wijaya, Syarifuddin, Rahmadanita, Kho'im, & Rochman, 2025). The results of the Spearman test indicated a significant but weak positive correlation between the level of self-medication knowledge and behavior ($\rho = 0.000$; correlation coefficient = 0.244). These findings imply that although increased knowledge tends to be followed by better self-medication behaviors, the effect is still limited in improving the quality of overall self-medication practices in the community (Hikmiyah, Almuhtarihan, Sendi Lia Yunita, Titani, & Atmadani, 2022; Shahid et al., 2024).

Based on the findings of previous research, it is known that the level of public knowledge about self-medication still needs to be improved. Given that gastritis can have serious consequences if not treated properly—especially due to the lack of individual awareness of personal health affected by irregular diets, unhealthy lifestyles, and high levels of stress—the researcher was interested in conducting further studies on the level of knowledge and public behavior towards self-medication practices in gastritis at Sharia Pharmacies.

2. Methods

The design of this study used a *cross-sectional* descriptive approach, with the analysis using the chi-square test to evaluate the relationship between highly knowledgeable people who were less likely to commit incorrect self-medication and looked at the correlation between education level and knowledge. The research was conducted on visitors to the Independent Pharmacy. The population of this study is the general public where the sample taken is 100 people. This study uses purposive sampling techniques in sampling, with primary data as the main source obtained through filling out an online questionnaire using Google Form.

The questionnaire scale used in this study uses the Guttman scale and data processing is carried out using the SPSS statistical application (Zein et al., 2019). Data processing was carried out to measure the level of knowledge of the respondents, which were classified into three categories, namely: good knowledge (score above 80%), medium knowledge (score between 60% to 80%), and poor knowledge (score below 60%) (Almaghrabi, 2024; Harahap K.; Tanuwijaya, J., 2017).

Meanwhile, self-medication behavior was analyzed based on understanding of indications, dosage, side effects, storage methods, rules of use, and drug interactions. The assessment of drug use behavior categories were divided into Safe Self-Medication (76%–100%), Risky Self-Medication (56%–75%), and Never Self-Medication (less than 55%) (Jariya et al., 2022; Wijaya, Rahmadanita, Syarifuddin, Rochman, & Kho'im, 2025). The data was then analyzed through two stages, namely univariate analysis to describe each variable singularly, and bivariate analysis to see the relationship between the two variables.

3. Results and Discussion

The data obtained were analyzed to determine the extent of respondents' understanding of the correct concept of self-medication, as well as associated with demographic characteristics to obtain a more comprehensive picture.

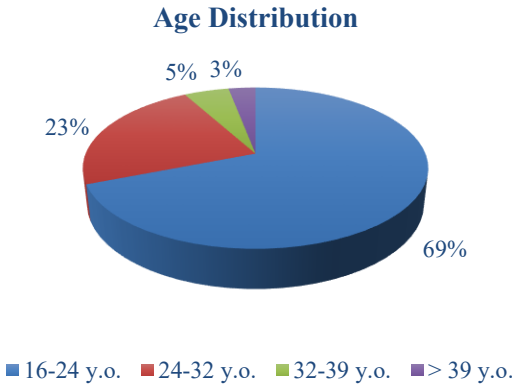

Figure 1. Age Distribution of Respondents

Respondents in this study were dominated by 16-24 years old, namely 69 respondents, then 23 respondents aged 24-32 years, 5 respondents aged 32-39 years and 3 respondents over 39 years old

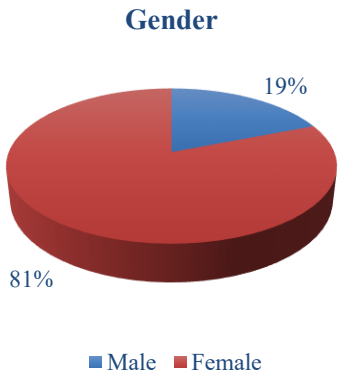

Figure 2. Gender Distribution

Respondents in this study were dominated by women with 81% of respondents, while men were only 19%.

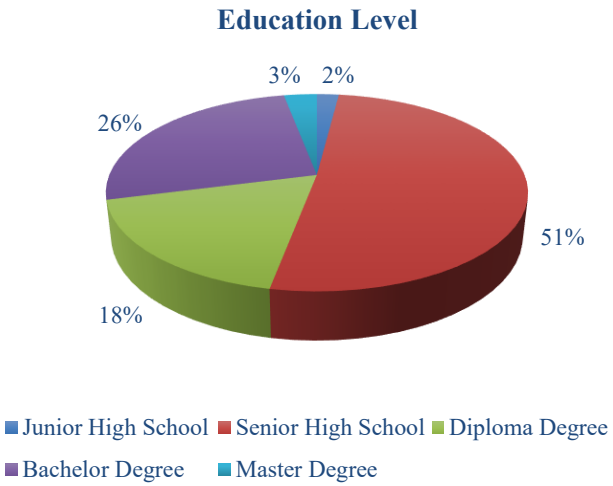

Figure 3. Distribution of Education Levels

The majority of respondents in this study have a high school (SMA) education background of 51%. The next highest level of education is Diploma 3 (D3) with a representation of 18%, followed by Bachelor (S1) at 26%. A small proportion of this group has a Master's degree (S2) at 3%, and the smallest proportion are Junior High School (SMP) graduates with only 2%.

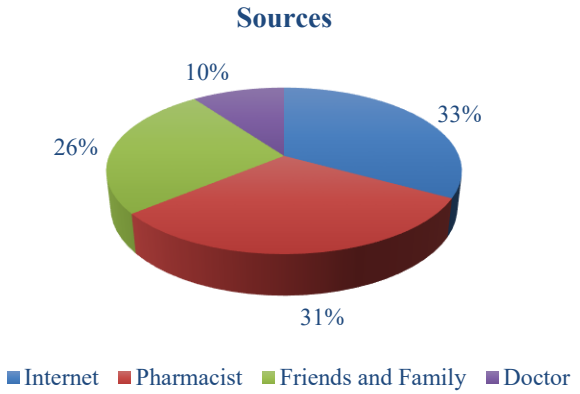

Figure 4. Gastritis Self-Medication Information Resources

Based on the graph above, the respondents found out about Gastritis Self-Medication from the internet (33% of respondents), pharmacists (31% of respondents), friends or family (26% of respondents) and only a few from doctors (10% of respondents).

Table 1. Distribution of the Relationship of Educational Factors to Knowledge of Gastritis Self-Medication

Education	Knowledge			Total
	Good	Average	Bad	
Junior HS	0	0	2	2
Senior HS	13	9	29	51
Diploma	9	1	8	18
Bachelor	10	4	12	26
Postgraduate	2	0	1	3
Total	34	14	52	100

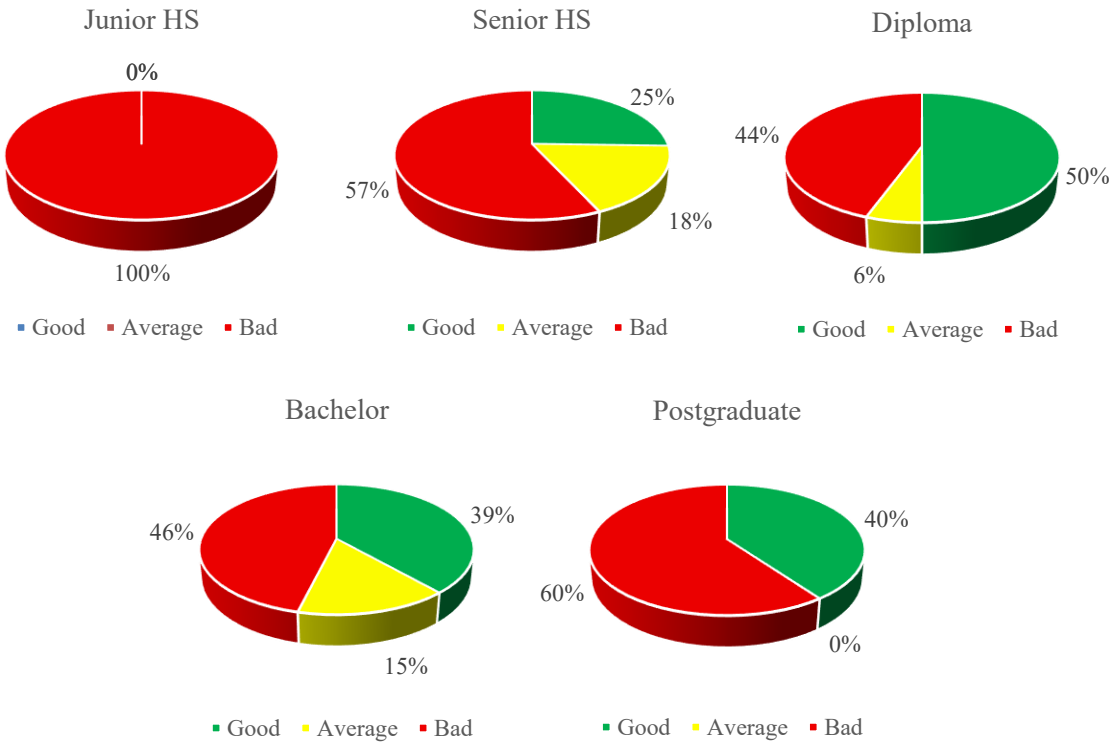

Figure 5. Percentage of Relationship of Educational Factors to Knowledge of Gastritis Self-Medication

Based on table 1 and graph 5, all respondents with junior high school graduates had poor knowledge of Gastritis Self-medication. Meanwhile, respondents who graduated from high school had more poor knowledge than those who had good or moderate knowledge in Gastritis Self-Medicine. Undergraduate and Postgraduate graduates have more good knowledge in Gastritis Self-Medicine. Meanwhile, Bachelor's graduates, although the distribution of data between good and bad is almost the same, but it is more inclined towards poor knowledge of Gastritis Swamedization.

Table 2. Distribution of Education Level Relationships to Gastritis Self-Medication Behavior

Education	Swamedic Behavior			Total
	Safe	Risky	Never	
Junior HS	0	0	2	2
Senior HS	1	3	47	51
Diploma	1	0	17	18
Bachelor	0	0	26	26
Postgraduate	1	0	2	3
Total	3	3	94	100

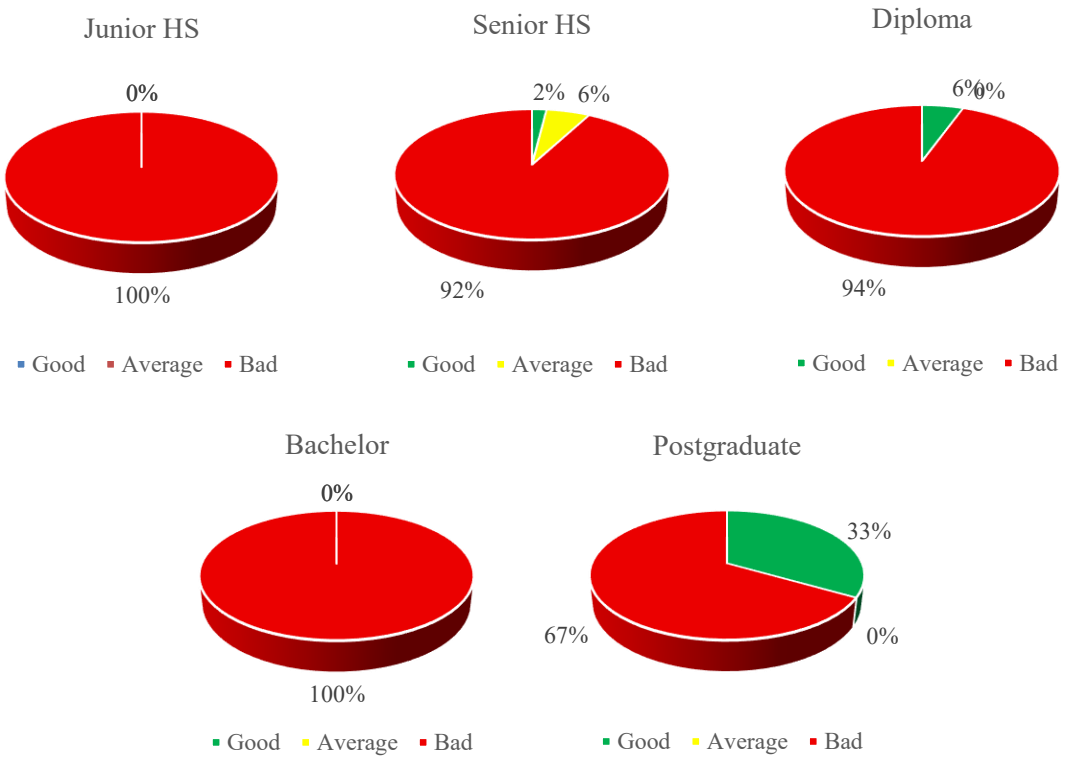

Figure 6. Percentage of Education Level Relationship to Gastritis Self-Medication Behavior

Table 2 and figure 6 presents an analysis of "Self-Medicated Behavior" based on the respondent's level of "Education". The categories of self-medication behavior are divided into "Safe," "Risky," and "Never." Overall, out of a total of 100 respondents, the vast majority (94 people) stated that they had "never" done self-medication. The number of respondents who conducted self-medication with "Safe" and "Risky" behaviors was the same, namely 3 people each.

When viewed based on education level, interestingly, the only respondents from the high school education level who conducted self-medication had "Safe" behavior, while the other three high school respondents had "Risky" behavior. At the Diploma and Postgraduate education levels, there was one respondent who conducted self-medication with "Safe" behavior, and none showed "Risky" behavior (Alfian et al., 2023). Meanwhile, all respondents from junior high school and undergraduate education levels who were part of this study stated that they "never" did self-medication. In general, this data shows that most respondents from various levels of education tend not to do self-medication.

Table 3. Chi-Square Test Results between the Relationship of Educational Factors to Knowledge and Behavior to Gastritis Self-Medication

Relationship	P value
Factors of Education over Knowledge	0,430
Educational Factors on Behavior	0,085

Based on table 3 above, the relationship between education to knowledge where the pearson value (p) = 0.430 and the behavior where the pearson value (p) = 0.085 is above the maximum threshold of 0.05 means that there is no relationship between education to knowledge and the relationship between sex to behavior.

The results of the study showed that there was a variation in the level of knowledge of gastritis self-medication among different levels of education. All respondents with junior high school graduates had poor knowledge of gastritis self-medication. Respondents with high school graduates had more poor knowledge than good or moderate. However, respondents with Bachelor's and Postgraduate graduates tended to have better knowledge of gastritis selfmedication. Nonetheless, Bachelor's graduates, despite the almost even distribution of the data between good and bad, tend to lean more towards poor knowledge. Overall, the Chi-Square test showed that there was no statistically significant relationship between education and knowledge, with a P value of 0.430 (greater than 0.05).

In addition, the results showed that the majority of respondents (94%) showed the behavior of never self-medication gastritis at various levels of education. The group with high school education had the largest number of respondents and contributed the most to this bad behavior, with 47 out of 51 high school respondents showing behavior that was never self-medicated. Safe self-medication behavior is only seen in a small percentage of respondents with high school, diploma, and postgraduate education levels. Meanwhile, all respondents who showed risky self-medication behaviors came from the high school group.

Although the higher education group (Diploma and Postgraduate) had a smaller number of respondents, the proportion of behaviors that were never self-medicated was also quite high among them. Statistically, the Chi-Square test showed that there was no significant association between education and self-medication gastritis behavior, with a P value of 0.085 (greater than 0.05). This is in contrast to the research conducted by Mandala et al. which stated that there is a significant relationship between education level and behavior (*p-value* 0.000 < 0.05) (Ong, Ooi, Shafie, & Hassali, 2020). These differences are likely due to variations in sample characteristics (such as demographics, size, and representation), differences in the definition and measurement of variables, contextual and environmental factors (such as access to health services and local culture), and differences in research design and methodology.

Conclusions

Based on the results of the study, it is known that the majority of respondents come from the age group of 16-24 years with a percentage of 69% and obtained information about gastritis self-medication, especially from the internet with 33%. Although there is a tendency that higher levels of education are associated with better knowledge of gastritis self-medication, statistical analysis suggests that the association is not significant. Similarly, the behavior of never self-medication gastritis was found in almost all respondents, with no

significant differences based on education level. Overall, these results show that although access to information is quite wide, there is still a gap between knowledge and community behavior in self-medication gastritis. Therefore, more effective and structured educational efforts are needed, as well as increasing health literacy so that people can carry out self-medication appropriately and safely

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Conflicts of Interest

The authors declare no conflict of interest.

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