

## RESEARCH ARTICLE

# Knowledge, Attitudes, and Practices of Grade XI Science Students Toward Leprosy at SMAN 1 Kutalimbaru

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### ABSTRACT

**Background:** Leprosy is a disease caused by *M.leprae*, which has great affinity in nerve cells. Leprosy is still feared by the community, including some health workers. The dreaded thing of this leprosy disease is the disability caused by this disease. Indonesia is the third country in the world with most leprosy patients. While the city of Medan is the city with the most leprosy patients in the region of North Sumatra. Based on age distribution, most cases of leprosy occur in productive age and high school students are included in the productive age. This study aims to determine the level of knowledge, attitudes, and actions of students of class XI IPA SMA Negeri 1 Kutalimbaru about leprosy.

**Methods :** This research is descriptive research with cross sectional approach. Performed at SMAN 1 Kutalimbaru. Data were taken from 57 samples of students selected by simple random sampling technique. From each sample, data were collected with questionnaires related to knowledge, attitudes and actions on leprosy. Results : Of the 57 people analyzed, 27 data were obtained with sufficient knowledge, 16 were knowledgeable, and 14 had less knowledge. For attitudes of respondents, most respondents have enough attitude, and for the actions of most respondents have enough action.

**Conclusion :** the knowledge that the students of class XI IPA on leprosy is still included in the category enough, while for the attitude also included in the category enough and the act of entry in enough category.

**Keywords :** Leprosy; Knowledge, Attitude and Action

## INTRODUCTION

Leprosy is a disease caused by *M. leprae*, which has a high affinity for nerve cells (Schwann cells) and reticuloendothelial cells, with a division time of 2-3 weeks. Leprosy is an infectious disease that causes very complex problems. These problems are not only medical but also extend to social, economic, cultural, security, and national resilience issues. 8 Many people still believe that leprosy is caused by curses, witchcraft, sin, food, or heredity. 18

Based on age distribution, the highest incidence of leprosy occurs in the productive age group. 8 According to the Central Statistics Agency, the productive age group is those aged 15 years and older. 2 Health promotion through school communities is one of the most effective health promotion tools among public health efforts, particularly the development of healthy lifestyles. This makes it easily accessible in public health efforts, and schoolchildren are a group that is very sensitive to change or renewal. 19

Based on this background, it is known that leprosy is a disease with a high incidence in Indonesia, and this disease often affects those of productive age, namely high school students. included in the productive age group. Therefore, the researcher was interested in conducting research on the level of knowledge, attitudes, and actions of class XI IPA students at SMA Negeri 1 Kutalimbaru regarding leprosy.

## METHOD

The type of research used in this study was descriptive research, employing a cross-sectional approach.<sup>14</sup> This research was conducted at SMA Negeri 1 Kutalimbaru on Jl. Pendidikan Pasar IV, Suka Rende, Kutalimbaru District, Deli

Serdang Regency, North Sumatra, from February 17, 2017, to June 7, 2017, targeting adolescents in Deli Serdang Regency.

The proportion estimation formula was used to determine the sample size.<sup>14</sup> Based on the formula above, the sample size ( $n$ ) in this study was 57 individuals. The sampling technique used in this study was simple random sampling.<sup>14</sup>

A validity test is used to measure the validity of a questionnaire. A questionnaire is considered valid if the statements in the questionnaire are able to

reveal what they are intended to measure. Validity testing was conducted using SPSS version 17.00 to test the validity of the items. If  $r \text{ count} > r \text{ table}$ , with a significance level of  $\alpha = 0.05$ , the question is considered valid. If  $r \text{ count} < r \text{ table}$ , with a significance level of  $\alpha = 0.05$ , the question is considered invalid.

Several operational definitions exist, including knowledge level, attitudes, actions, gender, and information sources. All collected data will be checked for accuracy and completeness (editing), manually coded (coding), entered into the SPSS computer program (entry), checked to avoid data entry errors (cleaning), saved for analysis (saving), and then further analyzed.

## RESULTS

The respondents selected in this study were 57 students of class XI IPA at SMA Negeri 1 Kutalimbaru. From all respondents, the data taken included gender and information sources.

### Distribution by Gender

Based on Table 1, 39 (68.4%) were female respondents, while 18 (31.6%) were

male. Therefore, the majority of respondents were female, at 39 (68.4%).

Table 1 Frequency of respondents by type gender

Characteristics	Frequency (N)	Percentage (%)
Gender		
Man	18	31,6
Woman	39	68,4
Amount	57	100

### Distribution by Information Source

Of the 57 respondents, 8 (14.0%) received their information from counseling, 30 (52.6%) from mass media, 11 (19.3%) from school, 7 (12.3%) from family/friends, and 1 (1.8%) from a neighbor. Therefore, the majority of respondents (30) (52.6%) received their information through mass media.

Table 2 Distribution of respondents based on information sources

Characteristics Information Source	Frequency (N)	Percentage (%)
Counseling	8	14,0
Media Massa	30	52,6
Schools	11	19,3
Family/Friends	7	12,3
Neighbors	1	1,8
Number	57	100

Based on gender, the research revealed that 18 respondents (31.6%) were male and 39 (68.4%) were female. The most common source of information about leprosy was through mass media, with 30 respondents (52.6%).

Table 3 Frequency distribution of respondents' level of knowledge regarding leprosy

Level of Knowledge	Frequency (N)	Percentage (%)
Good	16	28,1
Enough	27	47,4
Insufficient	14	24,6
Quantity	57	100

Based on the table above, it can be seen that 16 students (28.1%) had good knowledge about leprosy. 27 students (47.4%) had sufficient knowledge about leprosy. 14 students (24.6%) had poor knowledge about leprosy. Therefore, the highest frequency distribution was for students with sufficient knowledge about leprosy, with 27 students (47.37%).

This aligns with research conducted by Subhan<sup>19</sup> on students at SMAN 1 Teluk Batang, Kayong Utara Regency, where the majority of respondents had sufficient knowledge. These students' knowledge remained in the sufficient category due to the school's distance from the city center, making access to information difficult, and the school rarely provided materials related to leprosy.

Table 4 Frequency distribution of respondents' knowledge levels regarding leprosy based on gender

Gender	Level of Knowledge						Number	
	Good		Enough		Not enough		N	%
	N	%	N	%	N	%		
Man	5	8,8	9	15,8	4	7	18	31,6
<u>Woman</u>	<u>11</u>	<u>19,3</u>	<u>18</u>	<u>31,6</u>	<u>10</u>	<u>17,5</u>	<u>39</u>	<u>68,4</u>
<u>Jumlah</u>	<u>16</u>	<u>28,1</u>	<u>27</u>	<u>47,4</u>	<u>14</u>	<u>24,6</u>	<u>57</u>	<u>100</u>

Based on the table above, it can be seen that of the respondents with a good level of knowledge about leprosy, 5 (8.8%) were male, and 11 (19.3%) were female. Of the respondents with a fair level of knowledge about leprosy, 9 (15.8%) were male and 18 (31.6%) were female.

Of those with insufficient knowledge about leprosy, 4 (7%) were male, and 10 (17.5%) were female. Thus, the highest frequency distribution was for sufficient knowledge about leprosy, with 18 (31.6%) females.

According to Tubagus20, women are psychologically more motivated and diligent in their studies and work than men. This contributes to women's higher knowledge levels than men.

It can be seen that respondents with a good level of knowledge about leprosy, 1 person (1.8%) received information from counseling, 9 people (15.8%) received information from mass media, and 6 people (10.5%) received information from school. Respondents with a sufficient level of knowledge about leprosy, 5 people (87.5%) received information from counseling, 13 people (22.8%) received information from mass media, 4 people (7.0%) received information from school, 4 people (7.0%) received information from family/friends, and 1 person (1.8%) received information from neighbors. Respondents with a low level of knowledge about leprosy, 2 people (3.5%) received information from counseling, 8 people (14.0%) received information from mass media, 1 person (1.8%) received information from school, and 3 people (5.3%) received information from family/friends. Thus, the most widely used source of information to gain knowledge about leprosy is through mass media as many as 30 people (52.6%).

This research aligns with the notion that leprosy is rarely discussed in schools, families, and social settings. This makes mass media a more accessible source of information for students. These results also align with Subhan's (19) opinion, which suggests that leaflets are a readily accessible source of information for students and can be studied independently.

Table 6 Frequency distribution of respondents' attitudes regarding leprosy

Attitude	Frekuensi(N)	Persentase(%)
Good	20	35,1
Sufficient	22	38,6
Not enough	15	26,3
Amount	57	100

The table above shows that 20 respondents (35.1%) had a favorable attitude. 22 respondents (38.6%) had a favorable attitude, and 15 respondents (26.3%) had a poor attitude. Thus, the highest frequency distribution was for a favorable attitude regarding leprosy, with 22 respondents (38.6%).

According to Notoatmodjo14, knowledge, thoughts, beliefs, and emotions play a crucial role in determining a holistic attitude. Therefore, a person's knowledge can be used to assess or respond to a stimulus. Thus, knowledge will align with a person's attitude.

Table 7 Distribution of frequency of respondents' actions regarding leprosy

Action	Frekuensi(N)	Persentase(%)
Good	18	31,6
Sufficient	24	42,1
Not enough	15	26,3
Amount	57	100

The table above shows that 18 respondents (31.6%) demonstrated good behavior. 24 respondents (42.1%) demonstrated adequate behavior, and 15 respondents (26.3%) demonstrated inadequate behavior. Therefore, the highest frequency distribution was for adequate behavior regarding leprosy, at 24 (42.1%).

According to Notoatmodjo14, knowledge also influences a person's actions. Before someone adopts a behavior (a new behavior), they must first understand the meaning or benefits of that behavior or action for them. Thus, a person's actions will align with their knowledge.

## CONCLUSION

The level of knowledge of 11th grade science students regarding leprosy at SMAN 1 Kutalimbaru was considered adequate, with 27 students (47.4%). The attitudes of SMAN 1 Kutalimbaru students toward

leprosy were considered adequate, with 22 students (38.6%). The actions of SMAN 1 Kutalimbaru students toward leprosy were considered adequate, with 24 students (42.1%).

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