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Tuberculosis Disease Intervention through Education for the Community of Uteunkot Village, Muara Dua District, Lhokseumawe City

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ABSTRACT
Until now Tuberculosis has become a health problem in Indonesia which causes high mortality found in 8,471 cases. In Lhokseumawe City with the highest CNR of tuberculosis cases in Aceh Province, around 351 per 100,000 population. One of the efforts to prevent TB transmission is by avoiding contact with the community. It is necessary to educate about TB disease in terms of symptoms, transmission and prevention. This research involved around 90 people with a quasi-experimental research type of one group pretest-posttest design. Data was collected using a check list sheet and observation. The results of this activity indicated that there was an increase in respondents' knowledge of knowledge and prevention of Tuberculosis with the less category of 22 people (24.4%). Respondents level of knowledge in the sufficient category as many as 54 people (60.0%). Meanwhile, respondents whose level of knowledge was in the good category were 14 people (15.6%). but after being given education, the level of knowledge of respondents about tuberculosis increased, namely enough with the number of 70 people (77.8%). poor and good categories as many as 19 people (21.1%) while less a little (1.1%). It is hoped that the provision of TB disease education can increase knowledge in efforts to prevent TB transmission will increase for a better quality of life in the health sector.

Keywords: *Tuberculosis, Knowledge , Prevention*

1. INTRODUCTION

Tuberculosis (TB) is an infectious disease caused by the bacterium Mycobacterium tuberculosis[1]. Tuberculosis remains the 10th highest cause of death in the world which can cause the death of around 1.3 million patients[2]. In Indonesia in 2019 the number of tuberculosis cases found was 543,874 cases, a decrease compared to all tuberculosis cases found in 2018 which amounted to 566,623 cases[3].

The incidence of tuberculosis is a public health burden, especially in developing countries, including Indonesia. The World Health Organization (WHO) states that more than half of the population with pulmonary tuberculosis is in seven countries, namely India, Indonesia, China, the Philippines, Nigeria, Pakistan and South Africa. The number of pulmonary TB sufferers in Indonesia is ranked fourth highest in the world so that pulmonary TB is a major public health problem today[4][5].

In Aceh, in 2018 the number of TB cases was found to be 8,471 cases, an increase of 1129 cases from the previous year, namely in 2017 there were 7,342 cases. In addition, the notification rate for all TB cases or the Case Notification Rate (CNR) in Aceh is ranked 26th out of 34 provinces, namely 156 cases per 100,000 population. The term CNR itself is the number of all tuberculosis cases treated and reported among 100,000 residents in a certain area[6]. Lhokseumawe City is the district/city with the second highest CNR for all tuberculosis cases after Banda Aceh, namely 289 per 100,000 population in 2019[7]. The TB prevalence rate in the Muara Dua sub-district in Lhokseumawe City in the Muara Dua sub-district is 201 per 100,000 population[8].

Public knowledge and prevention efforts are very important to reduce the risk of pulmonary TB transmission. Moreover, the increase in the number of pulmonary TB patients in Indonesia is due to unhealthy habits. for example, families who still use eating or drinking utensils together, lack of lighting in the house, patients who still spit carelessly. In addition, there are myths related to the transmission of pulmonary TB that are still found in the community. For example, people think that the cause of pulmonary TB is not due to direct contact with TB patients (infection) but rather smoking habits, alcoholism, eating fried foods, sleeping on the floor and sleeping late at night [9].

Information that is still lacking in the community causes public knowledge to make efforts to prevent tuberculosis transmission[10]. If left unchecked, there will be adverse effects, namely the transmission of tuberculosis (TB) will become more widespread and the morbidity rate due to tuberculosis will increase resulting in the death rate will continue to increase[11]. The phenomenon that occurs is that family members with pulmonary tuberculosis who accompany the patient do not know about the transmission of pulmonary tuberculosis, such as not covering their mouths when sneezing and coughing, not throwing phlegm anywhere, sunlight does not enter the house, they are often exposed to dust and cigarette smoke and live in places where they live. Solid[12]. According to the 2019 Global Tuberculosis Report released by WHO (World Health Organization) on October 17, 2019, to achieve the goal of the 2020 TB strategy, namely reducing tuberculosis by 20 percent of the number of cases in 2015-2018[13].

Efforts need to be made by the community in preventing and transmitting pulmonary TB, including keeping family members away from sufferers when they cough, avoiding transmission through the patient's sputum, opening the windows of the house for air circulation and always drying the mattresses of pulmonary TB sufferers. One of the efforts to tackle tuberculosis is to increase the provision of complete and appropriate information through education. So this research needs to be done to see the level of knowledge and prevention of tuberculosis so that it can avoid transmission of pulmonary TB, because the community is an important factor in the transmission of tuberculosis, especially the family.

2. METHODE

This research was conducted in Uteunkot Village, Muara Dua District, Lhokseumawe City. The research was conducted from March 2022 to November 2022, the population in this study was the entire uteunkot community, which had a total of 90 people. Inclusion criteria are people who give consent to be sampled. Exclusion criteria were people who were not present when the research was conducted.

This type of research is Quasi Experiment with the One Group Pretest Posttest research design. The One Group Pretest-Posttest Design consists of one predetermined group. In this design, the test was carried out twice, namely before being given the treatment called the pre-test and after the treatment was called the post-test. In this research design, the experimental and control groups are in the same group/group. There are two types of material that are almost the same. The research pattern is the One Group Pretest-Posttest Design method

Data analysis classifies data based on variables and types of respondents, tabulates data based on variables and all respondents, presents data for each variable studied, performs calculations to answer the problem formulation, and performs calculations to test the hypotheses that have been proposed. The analytical method in this study consisted of univariate analysis, validity and reliability tests.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1. Univariate Analysis

Table 1. Characteristics of Respondents

Characteristics	Frequency (n=90)	Percentage (%)
Gender		
Man	29	32,2
Woman	61	67,8
Age		
child	12	13,3
Early teens	9	10
Late teens	22	24,4
Early adulthood	12	13,3
Late adulthood	17	18,9
early elderly	13	14,4
late elderly	3	3,3
Seniors	2	2,2
Work		

building	3	3,3
Welding workshop	1	1,1
Islamic teacher	1	1,1
Housewife	33	36,7
Muzzles	2	36,7
Laundress	3	3,3
Barber	1	1,1
Student	33	35,6
Entrepreneur	9	5,6
Farmer	1	1,1
Doesn't work	2	2,2
Pedicab Driver	1	1,1
Education		
kindergarten	11	12,2
Primary school	20	22,2
Junior High School	24	26,7
Vocational high school	4	3,3
SMA	31	34,4
Resources		
Hall	77	85,6
Neighbor	13	14,4
Total	**90**	**100**

Based on Table 1, it shows that the majority of the sexes are female as many as 61 people (67.8%), the age of the most respondents is the late teens category with a total of 22 people (24.4%). Most jobs are IRT with a total of 33 people (36.7%). The last education was high school with a total of 31 people (34.4%) and the most sources of information were from Balai as many as 77 people (85.6%).

The level of respondent's knowledge of knowledge and prevention of tuberculosis before education is carried out is as follows:

Table 2. Distribution of knowledge level before education

Knowledge level	**Frequency (n =90)**	**percentage (%)**
Not enough	22	24,4
enough	54	60,0
good	14	15,6
Total	90	100%

Based on Table 2, it was found that the distribution of respondents' level of knowledge regarding knowledge of tuberculosis before being given education was mostly in the less category with a total of 22 people (24.4%). Respondents whose level of knowledge is in the sufficient category are 54 people (60.0%). Meanwhile, respondents whose level of knowledge was in the good category were 14 people (15.6%).

The level of respondents' knowledge of knowledge and prevention of tuberculosis after education is carried out is as follows:

Table 3. Distribution of knowledge levels after education

knowledge levels	**Frequency(n=90)**	**percentage (%)**
Not enough	1	1,1
enough	70	77,8

good	19	21,1
Total	90	100%

Based on Table 3, it was found that the distribution of the level of knowledge of respondents about tuberculosis after being given education was mostly in the sufficient category with a total of 70 people (77.8%). Respondents whose level of knowledge was in the poor and good categories were 19 people (21.1%) while there were only 1 person (1.1%) less.

3.2. Discussion

Based on table 3.1, it shows an overview of the characteristics of the majority of the sexes, the majority are women with a percentage of 67.8 (61 respondents). [14] According to Kozier in Darusman (2009), women generally pay more attention and care about their health than men, women use health facilities more often and participate more in health. Based on table 3.1, it is known that the female sex mostly has the characteristics of the respondents referred to in this study are individual characteristics which include age, gender, education and occupation. The most distribution of age characteristics in this study were women. Statistical data from the Lhokseumawe Gampong Uteunkot City Government for 2020 shows that the number of residents with the female gender is greater than that of males[15].

Another factor that affects the knowledge of respondents is the level of education. The higher the education, the easier it is for someone to accept new things and easily adjust to the new ones[16]. Based on table 3.1, the majority of respondents said that the SMA level was 31 (34.4%) and the minority had TK education as many as 11 (12.2%). Knowledge is the result of knowing and occurs after people sense a certain object. Sensing occurs through the human senses, namely the senses of sight, hearing, smell, taste, and touch. Knowledge or cognitive is an important domain in shaping one's actions[16]. Knowledge in this study is the ability and understanding possessed by families who have family members with pulmonary TB including definition, signs and symptoms, prevention, modes of transmission, management, examination, and complications of pulmonary TB.

In addition, the factors that influence the knowledge of respondents are sources of information. The majority of respondents In this study, the majority of respondents obtained information from the Balai as many as 77 people (85.6%) and minorities as many as 13 (14.4%), apart from education, factors that could affect the knowledge of respondents were mostly influenced by information received formally and informally. According to Notoatmodjo (2012), information greatly influences one's knowledge. Even though someone has low education, if they get good information from various media such as TV, radio, reading books, or newspapers then it will be able to increase one's knowledge. Ease of obtaining information can help accelerate a person to acquire new knowledge.

The level of knowledge of respondents about tuberculosis before being given counseling was mostly in the less category as many as 22 people (24.4%), 54 people (60%) and 14 people (15.6%) were sufficient. Based on interviews with respondents, they admitted that they had never received information from their family, environment and social media about tuberculosis and did not know tuberculosis with correct information. The lack of public knowledge about tuberculosis causes a lack of concern about the impact caused by tuberculosis so that the knowledge and awareness of the community in examining sputum as an effort to prevent tuberculosis is still lacking on the grounds that they are embarrassed and afraid of being sentenced to have pulmonary tuberculosis[17]. Knowledge with preventive measures for the transmission of pulmonary tuberculosis in family members with pulmonary tuberculosis has a significant relationship. This shows that those who are knowledgeable are good and sufficient in preventive measures, compared to those who are less knowledgeable[9]. Insana Maria's research (2020) also found a relationship between family knowledge and prevention of pulmonary tuberculosis transmission. This shows that families with good knowledge have higher tuberculosis prevention efforts than families with less knowledge[18].

Other studies also show that there is a relationship between the level of knowledge and efforts to prevent pulmonary tuberculosis. This shows that people who have less knowledge about efforts to prevent pulmonary tuberculosis have a greater chance of contracting tuberculosis than people who have good knowledge about efforts to prevent pulmonary tuberculosis[19].

Respondents after being given education, the level of knowledge of respondents about tuberculosis increased, namely enough with the number of 70 people (77.8%). poor and good categories as many as 19 people (21.1%) while less a little (1.1%). Providing information using the lecture method and audiovisual media can have a direct effect on changing knowledge in TB prevention, where it can motivate them to behave better. Increased good knowledge of TB sufferers after receiving new interventions or information through audiovisuals received in the hope that they can behave better in maintaining, preventing, avoiding or overcoming the risks that have occurred.

This can be caused, among other things, because respondents have never received counseling or provided specific information about tuberculosis so that the behavior that existed before treatment was behavior that they accidentally got, such as from experience having been a tuberculosis sufferer or having a family or neighbor who had tuberculosis[20].

4. CONCLUSION

Based on the results of the study, it was found that there were differences in knowledge and prevention of tuberculosis before and after being given an intervention. Respondents whose level of knowledge is in the sufficient category are 54 people (60.0%). While respondents whose level of knowledge was in the good category were 14 people (15.6%) and after being given education, the level of knowledge of respondents about tuberculosis increased, namely enough with 70 people (77.8%). poor and good categories as many as 19 people (21.1%) while less a little (1.1%).

5. SUGGESTION

Health promotion education needs to be carried out routinely and regularly using more interesting methods and media so that other people or the public can easily understand what is conveyed to them. For the local government,especially the Lhokseumawe City Health Office, to be able to design better health promotion strategies in reducing TB cases through TB prevention programs. In future research, it is expected to be able to develop the use of other methods in disseminating health information that is better and more interesting. other health promotion media in the dissemination of better and more interesting health information.

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REFERENCES

[1] Kartasasmita, C. B. (2016). Epidemiologi tuberkulosis. Sari Pediatri, 11(2), 124– 129.

[2] Laura, A. (2018). Global tuberculosis report 2018. Geneva: World Health Organization. on.

[3] kemenkes R. I. (2019). Profil Kesehatan Indonesia Tahun 2019.

[4] Herdianti, Entianopa, Sugiarto. Effects of patient's personal character on prevention of transmission of pulmonary TB, Indonesian Journal of Tropical and Infectious Disease. 2020; 8(1): 9-15.

[5] Lubis HML. Kajian molekuler interleukin pada aspirat limfadenitis sebagai faktor risiko kejadian Pemodelan faktor risiko penyakit

[6] Menawati, T. (2021) *Menyikapi Tuberkulosis di Tengah Pandemi https://aceh.tribunnews.com/*. Available at: https://aceh.tribunnews.com/2021/03/27/menyikapi-tuberkulosis-di-tengah pandemi (Accessed: 11 November 2021).

[7] Dinas Kesehatan Aceh (2019) *Profil Kesehatan Aceh*.S

[8] Novianti, Roslinawati, Siska Desta Roza, Yeffi Masnarivan, 2021 Pemodelan faktor risiko penyakit

tuberkulosis di kota lhokseumawe. Health Care : Jurnal Kesehatan 10 (2): (245-250)

[9] Notoatmodjo, S. 2003. *Ilmu kesehatan masyarakat*. Rineka Cipta. Jakarta.

[10] Amalia, N. R., Basuki, D. R.,Kusumawinakhyu, T., & Purbowati, M. R. (2021). Pengaruh Pengetahuan dan Sikap terhadap Perilaku Pasien TB Paru di Balai Kesehatan Paru Masyarakat (BKPM) Purwokerto. Herb-Medicine Journal, 4(1), 28–35.

[11] Mardiatun, M., & Haqiqi, I. (2019). Efektivitas Pendidikan Kesehatan Dengan Video Tentang Pencegahan Penularan Penyakit Terhadap Pengetahuan Pasien Tuberculosis di Wilayah Kerja Puskesmas Sedau Tahun 2019 Jurnal Keperawatan Terpadu (Integrated Nursing Journal), 1(2), 76–86.

[12] Eka Rustia Purnama Sari, D. S. (2020). Hubungan Pengetahuan Dengan Pencegahan Penularan TB Paru Pada Anggota Keluarga Di Wilayah Kerja Puskesmas Depok III Sleman. 09(2), 115–123.

[13] Kemenkes RI. (2018). Tuberkulosis (TB). Tuberkulosis, 1(april), 2018.

[14] Menurut Kozier dalam Darusman (2009)

[15] Uteunkot PG. Data Penduduk Perdusun Tahun 2020

[16] Notoatmodjo, S. (2012) Promosi Kesehatan dan Perilaku kesehatan. Jakarta: Rineka Cipta

[17] Jehaman, T. (2020). Hubungan Tingkat Pengetahuan, Sikap, Dan Perilaku Terhadap Pencegahan Penularan Tuberculosis (TB) Di UPT Puskesmas Sabbang Tahun 2020. 6(2).

[18] Maria, Insana. (2020). Hubungan Pengetahuan Keluarga dengan Perilaku Pencegahan Penularan Tuberculosis Paru di Wilayah Kerja Puskesmas Martapura II. Jurnal Keperawatan Suaka Insan (Jksi), 5(2), 182–186. https://doi.org/10.51143/jksi.v5i2.242

[19] Ridwan, O. M. M. dan A. (2019). Hubungan Tingkatan Pengetahuan dengan Upaya Pencegahan Penularan TB Paru. JIM FKep, IV(2), 42–47.

[20] Notoatmodjo, S. (. (2018). *Metodologi penelitian kesehatan, jakarta. Rineka*