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A Study of Health Education: Knowledge And Mothers' Attitudes Towards Pulmonary Tuberculosis Treatment Seeking Behavior In Bengkulu City

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ABSTRACT

The goal of this study was to determine the association between mothers' knowledge and behavior concerning pulmonary tuberculosis (TB) and their children's attitudes toward seeking treatment for pulmonary tuberculosis at health facilities in Bengkulu City. This is an observational study with a cross-sectional design. The research participants were women who had children who were at risk of TB, with 17 samples meeting the inclusion criteria but not the exclusion criteria. Inclusion criteria: Mothers with children are at risk of developing clinical tuberculosis as a result of household contact with smear-positive pulmonary tuberculosis patients. The child is under the age of five. Data collection techniques used include questionnaire testing, analysis of questionnaire, and measuring instruments as research instruments, collecting data with questionnaires, checking each respondent's answers in accordance with data collection procedures, and analyzing the data using computerized statistical methods. According to the findings, some respondents had limited awareness of TB illness in at-risk children, supported pulmonary TB disease in at-risk children, sought treatment for TB disease in at-risk children, and sought care for at-risk children at health facilities.

A. INTRODUCTION

Health education is a transformation process that occurs within an individual with the goal of being healthy and fit. The goal of health education is to turn harmful habits into healthy ones for individuals, groups, and society as a whole (Sari, 2013). Tuberculosis (TB) is a direct infectious illness of the lungs caused by the TB bacteria (Mycobacterium Tuberculosis) (Andarmoyo & Sulistyo, 2015). According to (Aini et al., 2017) tuberculosis is an inflammatory illness caused by the bacteria Mycobacterium tuberculosis that spreads rapidly via the air.

The following are the general symptoms of tuberculosis in children: Weight loss for no obvious cause, or weight that does not grow appropriately or gains within one month of solid nutrition improvement attempts Temperature that lasts more than two weeks or recurs for no obvious reason; the fever is usually not high. Cough that lasts three weeks or more and does not go away (never subsides or the intensity is getting worse over time). Anorexia is characterized by a lack of appetite or by a failure to thrive. The youngster is less engaged in playing due to lethargy or sickness. Diarrhea that lasts more than two weeks and is not healed by usual therapy (Darmawansyah, 2017). TB can infect the lymph nodes, intestines, bones, brain and its membranes, larynx, kidneys, and, most notably, the breasts (Suhatridjas & Isnayati, 2020).

A research from (Aini et al., 2017) Tuberculosis mostly affects the lungs, however it also affects other organs of the body known as extrapulmonary organs. Lack of infrastructure and public awareness might delay the early diagnosis of Extrapulmonary Tuberculosis, putting public safety at risk (Aini et al., 2017).

The finding of (Kusyogo et al., 2012) mycobacterium tuberculosis has infected one-third of the world's population. Patients with pulmonary TB will miss an average of 3-4 months of work, costing them 20-30% of their yearly household income (Kenti Friskarini & Manalu, 2014). TB is a severe public health issue in Indonesia. Despite current advances, the prevalence of tuberculosis in Indonesia has been effectively decreased by 45 percent, from 343 per 100,000 people in 1990 to 189 per 100,000 population in 2010. The prevalence of tuberculosis has also decreased by 35%, from 443 per 100,000 people in 1990 to 289 per 100,000 people in 2010. As a result, the death rate fell by 71%, from 92 per 100,000 people in 1990 to 27 per 100,000 people in 2010.

Data Positive smear TB patients were found in 83.9 percent of Bengkulu province, 77.7 percent of North Bengkulu, 18 percent of South Bengkulu, and 75 percent of Lebong. The city of Bengkulu is ranked 1, indicating that the TB prevalence in youngsters is still high and is not being documented in health institutions (Provincial Health Office Profile, 2015). In 2016, 185 positive pulmonary TB patients were discovered in Bengkulu, with 67 cases occurring in youngsters. Bengkulu is the city with the highest number of persons sick with smear-positive TB, and it is a source of transmission for TB in children (Dinkes Privinsi Bengkulu, 2016).

Utilization of health care is determined by three factors: predisposing features, enabling qualities, and needs-based characteristics (Amalia & Wuryaningsih, 2018). Furthermore, the attitude toward seeking recovery for youngsters suffering from illnesses such as diarrhea, cough, fever, and a variety of other disorders demonstrates that fewer than half of those who obtain health care in traditional settings or in health facilities (Tessema et al., 2002). The behavior of mothers who take their children to health facilities for treatment is only 36.9 percent, which means that approximately 63 percent of children with TB are not taken for treatment or are taken to traditional healers, smart people, and others, and the death rate due to TB in children is estimated to be 10% of the 61000 deaths per year due to TB. Many children with tuberculosis do not receive effective care; there are over 1 million cases each year, and 10 million children are orphaned because their parents died of TB. The conduct of mothers in seeking treatment or examination for their children and family members who are in touch with and at risk of TB illness deserves more investigation. It is probable that parents or moms have limited understanding and attitudes concerning pulmonary tuberculosis.

B. METHODS

This is an observational study with a cross-sectional design that aims to identify the relationship between mothers' knowledge and behavior about pulmonary tuberculosis and their attitude toward seeking treatment for pulmonary tuberculosis in children at risk of visiting health facilities in Bengkulu City. The research participants were women who had children who were at risk of TB, with 17 samples meeting the inclusion criteria but not the exclusion criteria. Inclusion criteria: Mothers with children are at risk of developing clinical tuberculosis as a result of household contact with smear-positive pulmonary

tuberculosis patients. The child is under the age of five. Willing to participate as a research subject. Criteria for exclusion: Address change outside of the Bengkulu city limits. The following are the data collecting techniques: 1) administering a questionnaire test; 2) analyzing the questionnaire test and determining the measuring instrument as a research instrument; 3) collecting data via questionnaire; 4) checking each respondent's answers in accordance with the data collection procedure; and 5) performing data analysis in accordance with statistical methods used with computerization (Angrainy, 2017).

The collected data were analyzed using 1) univariate analysis (percentage analysis), which is the use of descriptive statistics to create a picture of the frequency distribution of respondents and to characterize the dependent and independent variables. 2) Bivariate analysis is the examination of two variables utilizing 2x2 cross tabulation to determine a significant connection (Odds Ratio) with a 95 percent confidence level. To evaluate the size of the risk of mothers not checking their children into health facilities based on research factors, an odds ratio (OR) with a confidence interval (CI) of 95 percent was utilized.

C. RESULT AND DISCUSSION

Table 1 shows the frequency distribution of positive smear TB patients in 2017 and the number of children under five who were in household contact with positive smear TB patients during the study based on the Bengkulu municipal health center.

Table 1 shows the number of TB patients and women with toddlers in Bengkulu based on Community Health Centers.

Community Health Centers	Positive Patient	Mothers who have children at home contact
Anggut Atas	1	0
Basuki Rahmat	5	1
Bentiring	2	1
Beringin Raya	4	0
Betungan	6	2
Jalan Gedang	5	1
Jembatan Kecil	4	1
Kampung Bali	2	1
Kandang	0	0
Lingkar Barat	0	0
Lingkar timur	0	0

Nusa Indah	4	1
Padang Serai	10	3
Pasar Ikan	3	1
Penurunan	6	2
Ratu Agung	1	0
Sawah Lebar	1	1
Sidomulyo	1	0
Sukamerindu	8	2
Total	64	17

The large number of TB patients in the Padang Serai and Sukamerindu community health centers is attributable to the health center's ideal location, which is near congested and slum residential homes and traditional markets.

1. Univariate Analysis

The 64 positive cases, 17 mothers (respondents) had toddlers in their homes. The mother's features are shown in table 2 below.

Table 2. The Distribution of Respondent Characteristics According to Age, Education, and Employment, (n=17)

Variable	n	%
Mother's Age		
< 29 year	10	58,8
≥ 29 year	07	41.2
Education		
High	06	35,3
Low	11	64,7
Occupation		
Unemployment	12	70,6
Employe	05	29,4

The respondents' ages were described as follows: 10 (58.8 percent) of the 17 respondents aged less than 29 years and 07 (58.8 percent) of the respondents aged more than 29 years (41.2 percent). Based on the formal education that has been completed, it can be observed that 06 individuals (35.3 percent) have a high education (high school and above) and 11 people have a low education (high school and below) (64.7 percent). Respondent distribution based on occupation, respondents' work in this study was

classified into two categories, namely not working and working. The majority of respondents did not work, with as many as 12 persons (70.6 percent) working as housewives, compared to 05 people working (29.4 percent).

The cumulative value of questionnaire responses was used to determine respondents' knowledge about TB. The total value is classified based on the median answer value. Respondents with values more than or equal to 24 are classified as having high knowledge, while those with values less than 24 are classified as having poor knowledge. The aggregate value of questionnaire responses was used to determine respondents' views toward TB. The total value is classified based on the median answer value. Respondents with values more than or equal to 42 are classified as having a positive attitude, while those with values less than 42 are classified as having a negative attitude. Table 3 displays the respondents' knowledge and opinions.

Table 3 The Frequency Distribution of Mothers' Knowledge About Seeking Treatment for Pulmonary Tuberculosis in Bengkulu City in 2017.

Variable	n	%
Knowledge		
Good	09	52.9
Less	08	47,1
Total	17	100

According to table 3, the proportion of respondents who have high knowledge of TB is 09 (52.9 percent), while the number of respondents who have less information is 8. (47.1 percent).

Table 4. The Frequency Distribution Of Mothers' Attitudes Toward Seeking Treatment For Pulmonary Tuberculosis in Bengkulu City in 2017

Variable	n	%
Attitude		
Good	11	64,7
Less	06	35,3
Total	17	100

According to Table 4, statistics on the proportion of respondents' views about TB are favorable for 11 persons (64.7 percent), whereas respondents with less knowledge are 06 people (35.3 percent).

Table 5. The Frequency Distribution of Mothers Seeking Treatment For Pulmonary Tuberculosis in Children at Risk in Bengkulu City in 2017

Variable	n	%

Attitude			
Good		10	58,8
Less		07	41,2
	Total	17	100

According to Table 5, the proportion of respondents' conduct about TB is good (58.8 percent), while respondents with less knowledge are 07 persons (41.2 percent).

2. Bivariate Analysis

Bivariate analysis was used to assess the association between the independent variable (mothers' TB knowledge and attitudes) and the dependent variable (mothers' behavior in seeking treatment for at-risk children). To assess the link between the independent and dependent variables, a bivariable test was used. The Chi-Square (2) test was employed, with a significance threshold of 0.05. (95 percent CI).

The Knowledge and Behavior of Mothers Seeking Treatment For Pulmonary Tuberculosis in Children at Risk in Bengkulu City

Table 6. The Association Between Respondents' Knowledge and the Behavior of Mothers Seeking Treatment For Pulmonary Tuberculosis In At-Risk Children in Bengkulu City in 2017

		Behavior				Total %	OR	*P* Value
		Less		Good				
			%		%			
Knowledge	Less	6	35,3	2	11,8	8 (47,1%)	7.75	0,008
	Good	1	5,9	8	47,1	9 (52,9%)		
Total		7	41,2	10	58,8	17 (100%)		

According to table 6, 8 (47.1 percent) of the 17 respondents do not bring their children to the Community Health Centre for examination, which is higher than the proportion of those who have limited understanding of TB. Meanwhile, the proportion of respondents who took their children to the health facility for examination was higher in 9 persons who had strong knowledge (52.9 percent). There was a significant connection ($p<0.05$) between knowledge and mothers' conduct in bringing at-risk children to the Community Health Centre. When compared to moms with poor TB awareness, mothers with high tuberculosis

knowledge may be 7.75 times more likely to bring their children to the Community Health Centre (OR 7.75).

The Attitude and Behavior of Mothers Seeking Pulmonary Tuberculosis Treatment for Children at Risk in Bengkulu City

Table 7. The Relationship Between Respondents' Attitudes and Mothers' Behavior in Seeking Pulmonary Tuberculosis Treatment For Children at Risk in Bengkulu City in 2017

		Behavior				Total %	OR	*P* Value
		Less	%	Good	%			
Attitude	Less	5	29,4	1	5,9	6 (35,3%)	7.19	0,009
	Good	2	11,8	9	52,9	11 (64,7%)		
Total		7	41,2	10	58,8	17 (100%)		

According to table 7, the proportion of respondents who did not take their risky children to the puskesmas was more likely to have a negative opinion toward TB (29.4 percent). Meanwhile, the proportion of responders who reported dangerous youngsters to the puskesmas was higher (52.9 percent). The link between respondents' opinions toward TB and at-risk kid treatment seeking behavior was statistically significant ($p<0.05$). The odds ratio of the connection is 7.19, which suggests that respondents with negative opinions had a 7.19 times greater likelihood of not seeking treatment for at-risk children than those with positive or favorable attitudes regarding TB.

The Chi-Square test findings revealed knowledge and attitude characteristics that were substantially associated to the conduct of moms who inspected hazardous children. Counseling officers contribute positively to improvements in maternal behavior, which is understandable given that mothers receive direct and frequent explanations when they bring their children to the puskesmas every month. The officer's straightforward explanation also gave a chance for the mother to ask questions of the officer, increasing the mother's understanding.

The bivariate test findings revealed that mothers' knowledge and attitudes regarding TB significantly influenced their behavior in seeking treatment for at-risk children, and attitudes were the dominating factors influencing mothers' conduct in seeking treatment for at-risk children. Mothers who are knowledgeable and positive about TB will bring their children to health care facilities.

The fact that moms or respondents did not inspect their children at the puskesmas underlined the considerable association between knowledge and attitudes. The mothers or respondents who did not check their children at the puskesmas did so because the children appeared healthy, the mothers were busy with their work, and the majority of the mothers stated that they did not know about children who were in contact with TB sufferers at home and needed preventive medicine or to be checked at the puskesmas. Another argument given by two moms was that they did not take their children to the puskesmas since they had taken their children to private practice physicians and clever people or shamans. According to the findings of the interview, the mother who took her kid to the doctor was already unwell and was given anti-tuberculosis medication. The reasons stated by moms for not bringing their at-risk children to the puskesmas show that the mothers' knowledge and attitudes remain poor.

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D. CONCLUSIONS

Based on the findings of this study's analysis and discussion, it is possible to conclude that some respondents have limited knowledge of TB disease in children at risk, have a positive attitude toward pulmonary TB disease in children at risk, seek treatment for TB disease in children at risk, and seek treatment for children at risk at health facilities.

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