Relationship between family support and tuberculosis transmission prevention behavior

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ABSTRACT

Introduction: Mycobacterium tuberculosis is the disease-causing agent in pulmonary tuberculosis (TB). One of the infectious diseases that still pose a threat to public health is pulmonary tuberculosis. Support from the family will lead to better TB transmission prevention practices. In the working environment of the Sidotopo Wetan Public Health Center in Surabaya City, this study was undertaken to examine the link between family support and the behavior of avoiding the spread of tuberculosis.

Methods: TB patients in the working area of the Sidotopo Wetan Health Center were the subject of a correlational and cross-sectional study with up to 65 respondents using simple random sampling, with the criteria for respondents being TB patients in the Sidotopo Wetan Health Center area in 2021 and undergoing treatment until May 2022. The research tool is a closed questionnaire that has undergone validity and reliability testing. Data analysis was tested by the spearman correlation test (α = 0.05).

Results: Our analysis showed that family support influenced the behavior of preventing TB transmission by 99.1%. Based on statistical tests, it can be seen that the p-value <0.001 is smaller than the alpha (0.05).

Conclusion: In the working environment of the Sidotopo Wetan Public Health Center, Surabaya City, there is a substantial correlation between family support and the behavior of avoiding TB transmission, according to this study.

Keywords: Tuberculosis, family support, transmission.


INTRODUCTION

One of the top 10 global killers and the most common infection-related cause of death is tuberculosis (TB), an infectious illness. Transmission prevention practices that patients, families, and communities may implement are one of the elements preventing the spread of TB. A contagious disease called tuberculosis (TB) causes new infections every year. With a 41% case detection rate, Indonesia has the third-highest TB burden in the world.1

According to the World Health Organization (WHO) report Tuberculosis Report 2019, globally,2 2018 estimated 10.0 million (9.0-11.1 million) people were diagnosed with TBC in 2018, a number that has been relatively stable in the past several years.2 TB affects people of both sexes and all age groups, but the highest weight is in men (age ≥15). This accounted for 57% of all TB cases in 2018. In comparison, women accounted for 32% and children (age< 15 years) 11%. Of all cases of TB, 8.6% were people living with HIV (ODHA). There were 566,623 TB cases reported in 2018 in Indonesia. When compared to all TB patients, the quantity rose. There were 446,732 cases in 2017, with the largest cases found in East Java, Central Java, and Western Java, three provinces with TB cases 44% of all TB cases in Indonesia.3 According to preliminary research, Yogyakarta city saw 931 cases of TB patients in 2018, Bantul district saw 1,145 cases, the district saw 253 cases, and the mountain district saw 488 cases. This means there were 988 cases overall.4,5

Support from other family members is given to one member of the family so they can carry out the duties of the family. Family assistance might take the moral or financial shape for family members.6 A patient's ability to cope with the disease treatment process will improve greatly if they have family support. Family support is one of the approaches to stop the spread of TB.7 Family support takes the form of informational, evaluation, instrumental, and emotional support. It is an attitude and an act of family acceptance of family members.6 To make family members feel that someone is paying attention, family support is a type of interpersonal interaction that comprises attitudes, behaviors, and acceptance of family members.8-10 Because family support is regarded to lessen or buffer an individual’s health consequences, those in supportive social environments often have better conditions than those who lack it.11 This research was carried out in the working area of the Sidotopo Wetan Health Center, Surabaya City. This type of research is analytically observational because the researcher tries to find the relationship between family support and the behavior of preventing TB transmission.
METHODS

Study Design
This study qualified as an analytical observational study since the researcher used a cross-sectional technique to determine the association between variables, measuring the independent and dependent variables just once at a time. Support from the family serves as the study’s independent variable. The behavior of avoiding TB transmission is the dependent variable in this study. 65 TB patients receiving treatment at the Sidotopo Wetan Health Center from May 2021 to May 2022 made up the study’s population. To get 65 respondents, a straightforward random sample procedure was utilized. This study was conducted from April 2022 to May 2022 in the Sidotopo Wetan Health Center’s working area in Surabaya City.

Data Collection
Data collection techniques and instruments used in this study were questionnaires, family support, and TB prevention. The following data collected through interviews are age, gender, previous educational history, current occupation, and duration of treatment. The family support variable was assessed using a questionnaire that evaluates emotional, assessment, instrumental, and informational aspects.

Data Analysis
The data analysis technique used univariate and bivariate analysis, using the Spearman Correlation statistical test using the SPSS program with a significant level of p=0.05. If the results of the statistical test show p>0.05, then the hypothesis is rejected, which means there is a relationship between the independent and dependent variables.

RESULTS

Results and Discussion General Data
The study results on respondents’ characteristics, including age, gender, education, occupation, and length of treatment, can be seen in Table 1 as follows:

Based on the results of the study, it was found that the majority of the sample were patients with the age range of 45-59 years (25 people; 38.5%), with the dominant gender women as many as 38 (38.5%).

Reviewed from the last educational status, most patients had the most educational history at the senior high school level of 35 (53.8%). When examined from work, most patients worked in the private sector of 28 people (43.1%), with the total patient duration of treatment more than 2 months.

Results and discussion of special data
The results of research on family support based on Emotional, Assessment, Instrumental, and Informational are presented in Table 2 as follows:

*Analysis was carried out using Spearman’s correlation test. The result was considered significant if the p-value was ≤0.05.

Based on Table 2, it was found that the majority of patients had good family support, with 54 respondents (83.1%). Based on Table 3, it was found that the majority of patients had a good habit of preventing TB transmission, with as many as 60 respondents (92.3%). The results showed that most
respondents with good family support also had good TB transmission prevention behavior. This result indicates that 65 respondents with pulmonary TB it is known to have pulmonary TB transmission prevention behavior based on family support. They have various values, namely respondents with good transmission prevention behavior, as many as 60 respondents, most of whom get good family support. Fifty-four respondents (83.07%) and the remaining only 6 respondents (16.93%) received less family support. Respondents who had less transmission prevention behavior, as many as 5 respondents (100%), consisting of 5 respondents (100%), received less family support, and 0 respondents (0.0%) got good family support. The results of data analysis using the Spearman test obtained a correlation of 0.680 with family support affects the behavior of preventing TB transmission by 99.1%. It can be seen that the p-value <0.001 with a level value of 0.05. The p-value is smaller than the level value (p < 0.05). Thus, Ho is rejected, which means a relationship exists between family support and TB transmission prevention behavior.

DISCUSSION

The results of the data presented in Table 1 show that most of the respondents were in middle adulthood (45-59 years), with a total of 25 respondents (38.5%). Middle adulthood is a long period in the human life span marked by various physical and mental changes. Middle adulthood is the age range in the productive age category. The TB control guidelines state that around 75% of TB patients are in the effective age group.9 There were 65 respondents, most female, and as many as 38 respondents (58.5%). This follows the results of Sembiring’s research (2012),15 which shows that the most gender is male at 69%, while the female gender is 31%. However, this study’s results differ from the Health Profile of East Java Province (2013), which states that TB sufferers are more common in men than women.13 The results of this study differ from research conducted by Asiah (2014), which states that the female sex is more affected by TB, which is 53%, than the male gender.14

The results showed that of the 65 respondents, the last education varied, where the highest education was SMA (53.8%) and the lowest education was SD (24.6%). Education is the most important thing to provide development assistance from the whole individual, to develop the potential within the individual himself as much as possible.16 The low level of education will make it difficult for individuals to understand the problems that occur. Relatively high education will provide convenience in understanding and ease in receiving the knowledge gained.16 Most of the respondents’ occupations are private employees, as many as 28 respondents (43.1%). The results of this study follow research conducted by Muniroh (2012), which states that most of the respondents work as private employees, which is 80%.17 Work is an individual activity that aims to earn income to meet the needs of daily life. Employment is also associated with meeting individual health costs. TB patients who work have financial maturity, making it easier to obtain health services.16

TB patients require a long cure to determine the right diagnosis, and it must be treated properly so that it does not become a chronic disease. The process is necessary for TB respondents to undergo treatment until they are declared cured. If the TB respondent is not regularly taking medication, the TB bacteria will become immune, making the disease more difficult to treat. The respondent will need a longer recovery time and a longer treatment period.18 Family support is a process of relationship between the family and its social environment that can be accessed by the family that can be supportive and assists family members.19 TB patients who get good family support will feel the benefits that can help improve and maintain the physical condition of TB sufferers.19 The results showed that most of the values of family support for TB patients tended to be good family supports. The results of family support showed that 54 respondents (83.1%) received good support, and 11 respondents (16.9%) received less support. One of the functions that must be carried out in the family is the family care function, namely, providing care to sick family members.8 The results showed that the various transmission prevention behaviors were good. Prevention behavior with the number of respondents used as many as 65 respondents where 60 respondents (92.3%) get good support, and 5 respondents (7.7%) earn less support. This study follows a survey by Asiah (2014), which found that 46.1% of TB patients had good transmission-prevention behavior. The results of the study do not follow the research conducted by Sembiring (2012), which showed that most TB patients had poor transmission prevention behaviors of 96.6.13 The level of knowledge and attitudes of respondents influences good and poor behavior carried out by respondents. Bad behavior is a risk factor for TB disease, such as coughing over three weeks, not checking phlegm, or taking medication irregularly. This can worsen the disease and can be a source of TB transmission.20

One factor influencing behavior is the environment (physical environment), socio-cultural, and economic. Environmental factors are the dominant behavior in individual behavior. Individual behavior from the level of health according to is influenced by 3 main factors, namely predisposing factors, which include environment, knowledge, attitudes and actions towards health, education level, socioeconomic level, and employment status; enabling factors which include the affordability of health facilities for the community or the availability of facilities and infrastructure; reinforcing factors which include the support of community leaders, health workers, and the role of cadres.21

Individual behavior is the individual's actions or activities that outsiders can observe directly or cannot keep. The level of knowledge and personal attitudes influences individual behavior. Respondents’ good behavior in preventing transmission of TB disease is checking sputum, covering the mouth when coughing, not throwing phlegm anywhere, not talking too close to other family members or other people, and maintaining the immune system.22 This research still consisted of a limitation which is several compounding variables that were not controlled yet in this study that can decrease the reliability of this study.
CONCLUSION

Based on this study, there was a significant relationship between family support and the behavior of preventing TB transmission in the working area of the Sidotopo Wetan Public Health Center, Surabaya City. Further studies with more comprehensive designs are needed to evaluate factors that are affected family support to improve TB transmission through behavior.

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CONFLICT OF INTEREST

The authors declare that all authors have approved no conflict of interest and the final manuscript of this paper.

AUTHOR CONTRIBUTION

All authors similarly contribute to the thinking about from the investigate concepts, information acquisitions, information investigation, factual investigations, changing the paper, until detailing the consider comes about through publication.

ETHICAL CONSIDERATION

This research obtained another ethic certificate from the Health Research Ethics Committee of Universitas Nahdlatul Ulama Surabaya No. 068/EC/KEPK/UNUSA/2022.

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