Psychosocial Needs Analysis of Patients with Pulmonary Tuberculosis

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Abstract

Pulmonary tuberculosis is a chronic lung disease which has a physical as well as psychosocial impact on the patients. Until recently, existing government programs still focus on the treatment and contamination prevention of the disease. The current existing program is not directed towards solving the patients’ psychosocial problems, although the impact thereof is very influential towards the discipline in undergoing treatment and the prognosis of Tuberculosis (TB) as a disease in patients. This research aims to analyze factors that are most influential in fulfilling the psychosocial needs of TB patients in the city of Cirebon. This research uses a correlational descriptive method. 171 pulmonary TB patients involved in this research were chosen through consecutive sampling from 10 public health centers in the City and Region of Cirebon. The psychosocial needs of pulmonary TB patients are measured by instruments developed by the researchers. Prior to using the instrument, a validity and reliability test has been conducted. The result indicates that there are three dominant factors that are closely related to the patients’ satisfaction in meeting their psychosocial needs. These factors are the psychological condition during the last week, duration of treatment and supporting services, whereas demographic factors are not related to their satisfaction in meeting their psychosocial needs. The result of this research can be considered by the government to provide supporting services at Public Health Centers in order to fulfill the psychosocial needs of pulmonary TBC patients and avoid drop out cases.

Keywords: health services, psychosocial needs analysis, pulmonary tuberculosis

Introduction

Pulmonary tuberculosis (pulmonary TB) is a disease of infection which attacks the lungs and shows specific symptoms of granuloma formation and causes necrosis of the tissue. This is a chronic disease and is contagious to others. Pulmonary TB not only shows a physical impact but also causes a psychosocial impact to the patients. Physical impacts are among others weakness, paleness, chest pain, decrease of body weight, fever and
perspiration. Whereas psychosocially it causes, among others, emotional problems related to the disease like feeling of boredom, no motivation, until serious mental disturbances including heavy depression. Other psychosocial issues are the presence of a stigma within the society, feeling of isolation and inconfidence, as well as economical problems. A qualitative research in India shows that pulmonary TB patients experience various psychosocial issues caused by the disease they suffer from such as fear or depression, shock on finding that they suffer from pulmonary TB or disbelieve that they suffer from TB, shame and fear of death. In facing and going through their life as pulmonary TB patients, every individual shows different responses depending on how they cope and the support from their family, surrounding society and the government.

In 2011 there is an estimated 8.7 million new cases of pulmonary TB and 1.4 million patients die thereof. More than 95% of the death toll caused by pulmonary TB occurs in countries with a medium to low income. Throughout the world pulmonary TB is a chronic disease and holds the second position in infection-caused deaths. Based on the 2007 Riskesdas data, the total of TB patients in Indonesia reaches 0.7% of the total population, and in West Java 0.9% of the total population suffers from pulmonary TB with the following rank: City and Region of Cirebon, Region of Garut, Indramayu and Purwakarta.

Pulmonary TB in Indonesia is considered a chronic disease, ranks first in death caused by infection and with a majority of patients within the productive age range. Based on the 2009 WHO report, the number of tuberculosis patients in Indonesia is 528,000 people, ranking third in the total of pulmonary TB patients in the world after India and China. Further, according to the 2010 WHO report, Indonesia’s rank becomes fifth in the world with a total of 429,000 patients. The prevalence rate is 285/100,000 population per year. The mortality rate caused by pulmonary TB is estimated at 27/100,000 population per year. Five countries with the highest rate in 2010 are India, China, South Africa, Nigeria and Indonesia. In order to control the problem of pulmonary TB in Indonesia, the government has implemented various programs focusing on treatment and prevention of pulmonary TB contamination. Currently the government has implemented a program known as the Programmatic Management of Drug Resistance TB (PMDT). In 2011-2014 PMDT aims to gradually conduct diagnosis and treatment of Multidrug Resistance Tuberculosis (TB MDR). It is estimated that there is approximately 80% of TBC drug resistant cases in Indonesia. During 2010-2014 the number of pulmonary TB drug resistant cases to be treated totals 11,000 cases. During this period, PMDT will be developed to include all provinces in Indonesia. However, out of all programs developed and implemented by the government, none aims to overcome the psychosocial problems faced by pulmonary TB patients; meanwhile the psychosocial impact is very significant to the discipline in treatment and the prognosis of pulmonary TB patients. Patients who suffer from depression and despair because of the disease, will not take medication with the risk that they will not recover and will contaminate others around them. It also effects themselves resulting in a bad prognosis of the disease and hence speed up death. Based on the issues mentioned above, we have formulated a problematic question: “How far is the psychosocial needs of pulmonary tuberculosis patients fulfilled in the City of Cirebon? What factors most influence the needs of these psychosocial problems?” To answer these research questions, this research aims to analyze factors which influence the psychosocial needs of pulmonary tuberculosis in the City of Cirebon.

Methods

The type of research implemented is correlational descriptive which aims to find the relations between various related factors with the psychosocial needs of pulmonary TB patients. The population in this research is the entire TB patients within the working area of the City of Cirebon Public Health Centers totalling up to 1,485 cases. Sample taking in this research uses the non-probability technique with a consecutive sampling method meaning that every respondent in this sampling technique who comes to the Public Health Centers (10 Public Health Centers in Cirebon) and meets the criteria of choice sampling is included in this research until the required number of subjects is acquired. The criteria for inclusion in this sampling are: pulmonary tuberculosis patients, including those of adult age, still under treatment at the Public Health Center, and is able to read and write. After 1.5 moths of research a sample of 201 patients was obtained. However, only 171 patients were included in the data analysis, since it was not possible to include the remaining patients due to the fact that their data were incomplete.

Data collection was implemented using a questionnaire adopted from the inventory of psychosocial needs measurement of cancer patients known as Psychosocial Needs Inventory. Measurement includes measuring health status, health services used, problems faced in daily life and psychosocial needs. The instrument developed has been tested by content validity against an expert panel of 3 persons consisting of one internal medicine specialist, one psychologist who is an expert on instrument development and one nurse who had conducted a qualitative research on the life experiences of pulmonary TB patients. A reliability test has been implemented on 20 pulmonary TB patients at the Garuda and Kiara Condong public health centers,
In implementing this research, considerations regarding ethical principles has been observed. Prior to implementing the research, researchers first explained about the research to all patients; then asked for patients’ agreement to become a respondent in the research. Data analysis began from univariate, bivariate and multivariate. Data on age, sex, education, job, health status, health services used, problems faced in daily life and psychosocial needs used frequency distribution and percentage. Bivariate test was implemented with Chi Square. In multivariate analysis all independent variables which have a significant p value of < 0.25 in the bivariate analysis are simultaneously analyzed for its strength in influencing a patient’s psychosocial needs through a multivariate analysis. The type of statistic testing implemented is linear regression as the kind of dependent variable in this research are categoric variables and do not possess a confounding factor.\(^{14}\)

### Results and Discussion

Based on the univariate analysis results, as seen in Table 1, nearly all respondents (42.7%) are mature adults with an almost equal number of male as well as female patients. Some of them (50.35) have an elementary education, followed by 29.2% high school education. The majority (80.1%) have an income of less or equal to Upah Minimum Regional (UMR)/regional base salary and are therefore still living with their parents (49.7%). The result concurs with a previous research which concluded that the population suffering from pulmonary TB are population within the productive age with low education and socio-economical level.\(^{11,15}\)

From the duration of time respondents suffered pulmonary TB, the majority (89.5%) suffered pulmonary TB for less than 2 years, and the majority of them (57.3%) are 3 months into initial treatment. This means that nearly all respondents are in the treatment phase that requires support in order not to fall into the group of treatment discontinuation. More than half of the respondents (53.8%) are aware that they suffer pulmonary TB, but nearly half of them (47.2%) do not know or are not aware that they suffer TB. This should bring us on alert and focus on handling them so that they do not become part of the group with discontinued treatment because of their lack of knowledge regarding the disease they are suffering from.

Partial respondents (52.2%) have of late a good health condition. This is supported by the number of respondents (81.1%) who have a good psychological condition within the last week. This may be because they feel that they are already undergoing treatment or maybe because they feel that their physical condition has shown progress. However, nearly half of them (46.8%) have recent bad health condition. This cannot be dismissed as respondents who have bad health conditions risk suffering complications.

Regarding health services, nearly all respondents (80.7%) declare that public health centers are the services they use in treatment with no other form of health services. Besides, a majority of them (62%) state that there are no supporting services that provide them with psychosocial support. This is proven by the 2011 Health Profile of the Region of Cirebon, where in order to solve the problem of pulmonary TB, the Public Health Center of the City of Cirebon only have a program to discover cases of TB and treatment of patients with TB assisted by officials in charge of supervising medicine intake.\(^{11}\) There is no specific program such as counseling or psycho-education to overcome the psychosocial problems of patients. Another program implemented by the public health center is providing information to patients and their families on how to avoid being contaminated.

Regarding the expectations and satisfaction of respondents concerning the fulfillment of their psychosocial needs during treatment, nearly all respondents (39.8%) have high expectations and a good experience in regard to their convalescence as can be seen in Table 2. There are 5 aspects of psychosocial needs in which case the respondents have a bad experience or feel their needs are not met during treatment at public health centers as can be seen in Table 3. These include the need for professional health officials, emotional and spiritual needs, informational needs, networking needs and practical needs. Health officials, as providers of health services, should heed these five aspects.

The bad experience regarding the needs for a professional person may be caused by the fact that when undergoing treatment at the public health center, they are not served by a professional staff but by a vocational staff present at the health center. This concurs with the comment of one of the health center’s staff that at the health center the physician is often absent and, if he/she is present, they will only be there for a very short time. Patients are daily served by vocational nurses. Furthermore, it can be concluded that the reason the emotional, spiritual and informational needs are not met is because the health center does not have a specific program therefore.

Further, a bivariate analysis is conducted to find any relation between respondents’ characteristics and level of satisfaction towards fulfillment of their psychosocial needs. Table 4 below shows the relation between meeting the satisfaction of psychosocial needs and respondent’s characteristics.
Table 1. Distribution of Respondent’s Frequency According to Demographic Characteristics in the Area of Cirebon (n=171)

| Variable                                                      | Total | Percentage (%) |
|---------------------------------------------------------------|-------|----------------|
| **Age**                                                       |       |                |
| Young adults                                                 | 45    | 26.3           |
| Mature adults                                                | 73    | 42.7           |
| Seniors                                                      | 53    | 31             |
| **Sex**                                                       |       |                |
| Female                                                       | 90    | 52.6           |
| Male                                                         | 81    | 47.4           |
| **Level of Education**                                        |       |                |
| University                                                   | 4     | 2.3            |
| High School                                                  | 50    | 29.2           |
| Junior High School                                           | 27    | 15.8           |
| Elementary school                                            | 86    | 50.3           |
| No education/Non-graduate of Elementary School               | 4     | 2.3            |
| **Duration of illness**                                       |       |                |
| <2 years                                                     | 153   | 89.5           |
| >2 years                                                     | 18    | 10.5           |
| **Marital Status**                                           |       |                |
| Unmarried                                                    | 122   | 71.3           |
| Married                                                      | 33    | 19.3           |
| Widow/Widower                                                | 16    | 9.4            |
| **Family members in one house**                              |       |                |
| Existent                                                     | 166   | 97.1           |
| Non-existent                                                 | 5     | 2.9            |
| **Close friends**                                            |       |                |
| Existent                                                     | 165   | 96.5           |
| Non-existent                                                 | 6     | 3.5            |
| **House status**                                             |       |                |
| Self-owned house                                             | 75    | 43.9           |
| Parents’ house                                               | 85    | 49.7           |
| Rented house                                                 | 11    | 6.4            |
| **Income**                                                   |       |                |
| Less than/Equal to UMR                                       | 137   | 80.1           |
| More than UMR                                                | 34    | 19.9           |
| **Name of disease**                                          |       |                |
| Aware                                                        | 92    | 53.8           |
| Unaware                                                      | 79    | 46.2           |
| **Other illnesses**                                          |       |                |
| Existent                                                     | 39    | 22.8           |
| Non-existent                                                 | 132   | 77.2           |
| **Treatment Phase**                                          |       |                |
| First 3 months                                               | 98    | 57.3           |
| Second 3 months                                              | 46    | 26.9           |
| Third 3 months                                               | 27    | 15.8           |
| **Last psychological condition**                             |       |                |
| Good                                                         | 137   | 81.1           |
| Bad                                                          | 34    | 19.9           |
| **Latest general health condition**                          |       |                |
| Good                                                         | 91    | 53.2           |
| Bad                                                          | 80    | 46.8           |
| **Other health services**                                    |       |                |
| Existent                                                     | 33    | 19.3           |
| Non-existent                                                 | 138   | 80.7           |
| **Supporting service**                                       |       |                |
| Existent                                                     | 65    | 38             |
| Non-existent                                                 | 106   | 62             |
| **Complementary therapy**                                    |       |                |
| Existent                                                     | 143   | 83.6           |
| Non-existent                                                 | 28    | 16.4           |
Table 2. Distribution of Respondents According to Experience and Hope towards Achieving Fulfillment of Psychosocial Needs of Pulmonary Tuberculosis Patients in the Area of Cirebon during September-October 2013 (n=171)

| Variable                              | Total | Percentage (%) |
|---------------------------------------|-------|----------------|
| Expectation                           |       |                |
| High                                  | 88    | 51.5           |
| Low                                   | 83    | 48.5           |
| Experience                            |       |                |
| Good                                  | 103   | 60.2           |
| Bad                                   | 68    | 39.8           |
| Expectation and experience            |       |                |
| High expectation, good experience     | 68    | 39.8           |
| High expectation, bad experience      | 38    | 22.2           |
| Low expectation, good experience      | 45    | 26.3           |
| Low expectation, bad experience       | 20    | 11.7           |

Table 3. Distribution of Psychosocial Needs of Pulmonary Tuberculosis Patients in the Area of Cirebon who have High Expectations and Bad Experience during September-October 2013 (n=28)

| Needs                                | Total | Percentage (%) |
|--------------------------------------|-------|----------------|
| Needs for Health Professional        | 15    | 39.5           |
| Emotional and spiritual needs        | 22    | 57.9           |
| Informational needs                  | 22    | 57.9           |
| Networking support needs             | 20    | 52.3           |
| Practical needs                      | 17    | 44.7           |

Table 4 indicates that there is no relation between age and level of satisfaction in meeting psychosocial needs (p value: 0.483, α: 0.05). This is also the case with sex (p value: 0.428; α: 0.05) and marital status with a p value of 0.587; α: 0.05. Statistical tests also indicate that there is no relation between existent/non-existent family members living in the same house with the level of satisfaction towards meeting patients’ psychosocial needs (p value: 0.692; α: 0.05); hence also with home status (p value: 0.275; α: 0.05). Statistic tests also indicate that there is no relation between income level with level of satisfaction in meeting the psychosocial needs of pulmonary TB patients (p value: 0.500, α: 0.05).

Duration of illness has yielded different results. Research results indicate that there is a correlation between duration of illness with satisfaction in fulfilling psychosocial needs (p value: 0.011; α: 0.05). Respondents who have suffered pulmonary TB for more than two years have a lower level of satisfaction on fulfilling psychosocial needs compared to respondents who have been ill for less than two years. This is probably because those who have suffered longer from pulmonary TB have undergone more negative experiences related to this disease. This supports the result of a previous research by Padayatchi et al. (2010) when patients still suffer from depression 2 years after being diagnosed with pulmonary TB. Based on the above table it is also obvious that respondents who have knowledge of their disease have a 0.528 times chance of satisfaction towards meeting their psychosocial needs compared to respondents who are not aware of their illness (CI 95%; OR: 0.249-1.149). One’s understanding about something is one factor which may change their attitude. A wrong perception about something may affect the recovery process of a patient, hence, an appropriate health education is required.

Besides knowledge and understanding of the disease itself, the patient’s general health and psychological condition is closely related to the level of satisfaction of psychosocial needs fulfillment felt by respondents in this research. This is concurrent with Lyon’s stress theory (2012) where a person who is in a bad emotional condition will give a negative response to conditions outside himself. Whereas, on the other hand, a negative perspective towards conditions outside oneself may cause stress. When a TB patient perceives that he is incurable, they will feel frustrated towards the disease they are suffering from and this may cause them to refuse treatment. This negative perception can be caused by their lack of knowledge about the disease. Therefore, it is important that nurses provide patients with psycho-education.
Table 4. Respondent’s Distribution according to Level of Satisfaction in meeting the Psychosocial Needs of Pulmonary TB Patients and Factors influencing it in the Area of Cirebon during September and October 2013 (n=171)

| Independent Variable                        | Total | Unsatified n | % | Satisfied n | % | OR (95% CI) | ρ Value |
|---------------------------------------------|-------|--------------|---|-------------|---|-------------|---------|
| **Level of satisfaction**                   |       |              |   |             |   |             |         |
| Age                                         |       |              |   |             |   |             |         |
| Young adults                                | 45    | 22.2         | 35 | 77.8        | 73 | -           | 0.483   |
| Mature adults                               | 34    | 26           | 54 | 74          | 73 | 1.146       | 0.428   |
| Seniors                                     | 53    | 17           | 44 | 83          | 83 | -           |         |
| Sex                                         |       |              |   |             |   |             |         |
| Female                                      | 77    | 23.3         | 69 | 76.7        | 76 | -           |         |
| Male                                        | 81    | 21           | 64 | 79          | 74 | 1.461       | 0.489   |
| **Level of Education**                      |       |              |   |             |   |             |         |
| University                                  | 100   | 25           | 3  | 75          | 73 | -           |         |
| High School                                 | 100   | 32           | 34 | 68          | 50 | 0.555-2.364 |         |
| Junior High School                          | 73    | 22.2         | 21 | 77.8        | 73 | -           | 0.336   |
| Elementary school                           | 86    | 16.3         | 72 | 83.7        | 83 | -           |         |
| No education/Non-graduate of Elementary School| 100   | 25           | 3  | 75          | 75 | -           |         |
| **Duration of illness**                     |       |              |   |             |   |             |         |
| <2 years                                    | 153   | 18.3         | 125| 81.7        | 81 | -           |         |
| >2 years                                    | 100   | 55.6         | 8  | 44.4        | 43 | (0.065-0.495) |         |
| Marital Status                              |       |              |   |             |   |             |         |
| Unmarried                                   | 33    | 18.2         | 27 | 81.8        | 77 | -           |         |
| Married                                     | 122   | 22.1         | 95 | 77.9        | 75 | 0.087       | 0.692   |
| Widow/Widower                               | 16    | 31.3         | 11 | 68.8        | 58 | (0.095-8.038) |         |
| Family members in one house                 |       |              |   |             |   |             |         |
| Existent                                    | 166   | 22.3         | 129| 77.7        | 74 | -           |         |
| Non-existent                                | 5     | 20           | 4  | 80          | 44 | (0.095-8.038) |         |
| Close friends                               |       |              |   |             |   |             |         |
| Existant                                    | 165   | 22.4         | 128| 77.6        | 73 | -           |         |
| Non-existent                                | 100   | 16.7         | 5  | 83.3        | 29 | (0.078-6.108) |         |
| House status                                |       |              |   |             |   |             |         |
| Self-owned house                            | 75    | 28           | 54 | 72          | 72 | -           | 0.275   |
| Parents’ house                              | 85    | 17.6         | 70 | 82.4        | 83 | -           |         |
| Rented house                                | 11    | 18.2         | 9  | 71.8        | 22 | -           |         |
| Income                                      |       |              |   |             |   |             |         |
| Less than/Equal to UMR                      | 137   | 21.9         | 107| 78.1        | 65 | -           |         |
| More than UMR                               | 34    | 23.5         | 26 | 76.5        | 38 | (0.374-2.219) |         |
| Name of disease                             |       |              |   |             |   |             |         |
| Knowledgeable                               | 92    | 27.2         | 67 | 72.8        | 64 | -           |         |
| Unknowledgeable                             | 79    | 16.5         | 66 | 83.5        | 55 | (0.249-1.149) |         |
| Other illnesses                             |       |              |   |             |   |             |         |
| Existant                                    | 39    | 23.1         | 30 | 76.9        | 33 | -           |         |
| Non-existent                                | 100   | 22           | 103| 78          | 72 | (0.401-2.199) |         |
| Treatment Phase                             |       |              |   |             |   |             |         |
| First 3 months                              | 98    | 25.5         | 73 | 74.5        | 71 | -           |         |
| Second 3 months                             | 46    | 10.9         | 41 | 89.1        | 52 | -           | 0.086   |
| Third 3 months                              | 27    | 8            | 19 | 70.4        | 22 | -           |         |
| Last psychological condition                |       |              |   |             |   |             |         |
| Good                                        | 137   | 14.6         | 117| 85.4        | 82 | -           |         |
| Bad                                         | 100   | 52.9         | 41 | 47.1        | 47 | (0.067-0.346) |         |
| Latest general health condition             |       |              |   |             |   |             |         |
| Good                                        | 91    | 12.1         | 80 | 87.9        | 74 | -           | 0.270   |
| Bad                                         | 80    | 33.8         | 53 | 66.2        | 63 | (0.123-0.590) |         |
| Other heath services                        |       |              |   |             |   |             |         |
| Existant                                    | 33    | 30.3         | 23 | 69.7        | 61 | -           |         |
| Non-existent                                | 138   | 20.3         | 110| 79.7        | 72 | (0.250-1.370) |         |
| Supporting service                          |       |              |   |             |   |             |         |
| Existant                                    | 53    | 35.8         | 34 | 64.2        | 40 | -           |         |
| Non-existent                                | 118   | 16.1         | 99 | 83.9        | 76 | (0.163-0.724) |         |
| Complementary therapy                       |       |              |   |             |   |             |         |
| Existant                                    | 28    | 39.3         | 17 | 60.7        | 21 | -           |         |
| Non-existent                                | 143   | 18.9         | 116| 81.1        | 62 | (0.360-0.855) |         |

*Signifikan pada α = 0.05
Based on the selection of multivariate model variables, in the final model three variables are selected which are most closely related to the satisfaction level of fulfilling the psychosocial needs of pulmonary TB patients; these are the psychological condition during the last week, duration of treatment and use of supporting health services as can be seen in Table 5 below.

The psychological condition of pulmonary TB patients is very closely related to their level of satisfaction in meeting their psychosocial needs because a person’s evaluation of whether psychosocial needs are fulfilled or not is manifested by their psychological condition which indicates a decreasing level. This is concurrent with Lazarus’ theory (2000) regarding evaluation of stressor someone undergoes. If the evaluation regarding stressor is negative, then the person will indicate a negative response as stress or a decreasing psychological condition. This research shows that psychological disturbances in pulmonary TB patients indicate that there is a problem with the patient. Therefore, they should receive attention from various parties, especially nurses as primary caregivers to the patients. Nurses must ensure that all the patients’ needs are met, including their psychosocial needs. This is an application of the advocative role and function of nurses towards patients.

Besides psychological conditions, the duration of treatment is a factor that also influences the respondents’ level of satisfaction towards meeting their psychosocial needs. Long-term treatment or therapy causes frustration for patients. This fact is concurrent with a previous research conducted in India which concluded that pulmonary TB patients suffer from psychological disturbances such as depression, anxiety, resentment and prejudice due to the length of period they suffer from the disease or the long-term treatment they have to go through. The result of this research is also supported by another research in Peru that shows that pulmonary TB patients who go through long periods of treatment suffer depression (52.5%) and anxiety (8.7%) due to their illness.

The feeling of dissatisfaction towards their psychosocial needs which are closely related to utilizing supporting health services, shows that the unavailability of supporting health services at Public Health Centers result in the patients not receiving the required services for the various psychosocial problems they face while suffering from pulmonary TB. Policy makers should seriously consider the issue of providing supporting services for patients.

This research provides several assumptions. First, that the 1.4% increase in meeting the psychosocial needs of pulmonary TB patients means reducing the duration of illness up to 0.272 years or 3.6 months after psychological condition variables within the last week and utilization of supporting services are controlled. Satisfaction of services indicate that respondents have received good services from public health centers where they go for treatment. Good services, of course, ensures that TB patients are able to undergo treatment according to the rules, which in the end can enhance their recovery process. The second assumption is that if the respondent’s psychological condition within the last week is not too good, their satisfaction towards fulfillment of psychosocial needs decrease. A person’s psychological condition influences his/her perception towards a situation. In a psychological condition which tends to decline or is not good, one tends to have a negative view on certain situations, in this case the health service they receive.

The third assumption is that enhancing the fulfillment of psychosocial needs of pulmonary TB patients up to 1.4% will decrease the use of supporting services to overcome the problem up to 0.27%. This means that if TB patients can fulfill their psychosocial needs, their needs for supporting services will decrease. However, in reality the public health centers where this research was conducted does not provide supporting services although the needs for these services in TB patients are quite high. Therefore, a program which can provide a solution is required. In other countries, such as reported by Acha et al. from Peru, it is discovered that psychosocial group therapy is effective in solving patients with problems of multidrug resistance (MDR).

| Model | Unstandardized Coefficients | Standardized Coefficients | T | p | Collinearity Statistics |
|-------|----------------------------|---------------------------|---|---|-------------------------|
|       | B | Std. Error | Beta | | | Tolerance | VIF |
| (Constant) | 1.465 | 0.125 | -0.201 | 11.731 | 0.000 | 0.930 | 1.075 |
| Duration of illness | -0.272 | 0.098 | -0.213 | -2.775 | 0.006 | 0.903 |
| Latest psychological condition | -0.290 | 0.078 | -0.278 | -3.709 | 0.000 | 0.864 | 1.158 |
| Supporting services | -0.127 | 0.065 | -0.142 | -1.954 | 0.052 | 0.925 | 1.081 |

Std. Error of the Estimate = 0.379; Durbin-Watson = 1.435
a. Predictors: (constant), pelayanan pendukung, lama sakit, kondisi psikologis terakhir
b. Dependent Variable: tingkat kepuasan
Conclusions

This research is a correlational research to analyze factors that influence the problem of meeting the psychosocial needs of pulmonary TB patients in the Area of Cirebon. 171 respondents have participated in this research. From this research it can be concluded that there are three factors which most significantly influence patients’ satisfaction regarding fulfillment of their psychosocial needs. These influences are, among others, the patient’s psychological condition within the last week, duration of treatment and supporting services; these are the factors mostly related to the satisfaction level of meeting the psychosocial needs of pulmonary TB patients. Public health center staff are suggested to provide supporting services or counselling for pulmonary TB patients when they come for treatment to public health centers. It is also suggested that the government provide supporting services or counselling for pulmonary TB patients.

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