Title:

Developing the Instrument for Assessing Psychosocial Needs of Clients with Pulmonary Tuberculosis

Short running title:

Psychosocial Needs of Clients with TB

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Abstract

A wide variety of programs that focus on the treatment and prevention of Pulmonary Tuberculosis has been applied by the government to overcome the problem in Indonesia. However, none of the programs are developed to address the psychosocial problems of clients with Tb. This research is part of our major study entitle psychosocial needs analysis of clients with TB.

The aimed of this study was to developed an instrumen to assess the psychosocial need of clients with TB. The development of this instrumen was inspired by Psychosocial Needs Inventory for cancer. This instrument was developed by the research team based on the inventory, interviews with 5 people with TB and recommendation from 3 expert panel and also refers to some of the articles from the Journal. Content and construct validity was conducted as well as reliability testing (n = 40).

This study found 35 item to assess the psychosocial need of clients with TB. This instrumen has good psychometric including high internal consistency (alpha averaging .981) Validity has been established for content and construct validity. Reliability after testing was high (r > 0.7).

It was concluded that this psychosocial assessment instruments can be used to assess the psychosocial needs of clients with TB. This instrumen need to be tested in a bigger sample and in another place to increase the reliability of it.

Key words: instrumen, pschosocial need, tuberculosis
Introduction

Pulmonary Tuberculosis is an infection caused by the bacterium Mycobacterium tuberculosis (Schweon, 2009). According to data from WHO (2010), the number of clients with pulmonary tuberculosis in Indonesia was ranked fifth in the world after India, China, South Africa, and Nigeria (WHO, 2010). Until now, in Indonesia, the majority of the sufferer are people in productive age groups and this disease remains the first cause of death due to infection. Number of tuberculosis clients in Indonesia amounted to 429,000 people. The prevalence of 285 per 100,000 population per year and the death rate from tuberculosis is estimated at 27 per 100,000 population per year.

A wide variety of programs that focus on the treatment and prevention of transmission of tuberculosis has been done by the Indonesia government to overcome the problem. The most recent program was Programmatic Management of Drug Resistance TB (PMDT TB). PMDT TB in 2011-2014 aims to gradually implement the diagnosis and treatment of Multidrug Resistance Tuberculosis (MDR TB). According to WHO (2013), there are approximately 80% of cases of tuberculosis drug resistance in Indonesia. During the years 2010-2014 the number of drug-resistant cases of TB to be treated is 11,000 cases. During this period PMDT TB will be developed in 33 provinces in Indonesia.

However, none of the programs that have been developed and carried out by the Indonesia government aim to address the psychosocial issues faced by clients with tuberculosis, whereas psychosocial impact of the disease has big influence on the prognosis of the disease and treatment compliance of TB clients. For example, clients who feel depressed about their condition (Aye´, Wyss, Abdualimova & Saidaliev, 2011; Jong, 2011), they do not want to take medication. Consequently the client will not recover from the disease and will certainly spread the tuberculosis to others around them. Therefore, nurse should address the psychosocial problems. Prior to the intervention, proper assessment of the psychosocial problem experienced by the clients is very important. Our research entitled Psychosocial needs assessment of clients with pulmonary tuberculosis has resulted in an instrument that can assess the psychosocial needs of clients with pulmonary tuberculosis.

Methods
The aimed of this study was to developed an instrument to assess the psychosocial need of clients with pulmonary tuberculosis. The development of this instrumen was inspired by Psychosocial Needs Inventory for cancer developed by Carol Thomas (2001). This study was descriptive quantitave. In Phase 1, the researchers developed the instrumen which referred to the Psychosocial Needs Inventory for cancer developed by Carol Thomas (2001) by considering various psychosocial aspects of pulmonary tuberculosis based on various theories and the latest research related to the issue (Acha, Sweetland, Guerra, Chalco, Castillo, & Palacios, 2007; Aye, Wyss, Abdualimova & Saidaliev, 2011; Padayatchi, Daftary, Moodley, Madansein, & Ramjee, 2010; Rajeswari, Muniyandi, Balasubramanian, & Narayanan, 2005; Rashmi, Prasad, Chand, 2014; Venkatraj1 & Prasad, 2013; Williams & Kaur, 2012; Vega, Sweetland, Acha, Castillo, Guerra, Smith, Fawzi & Shin, 2004). Then, the modified instrumen was reviewed by three experts, a TB specialist Doctor, an Expert in Clinical Psychology and a medical-surgical nurse experts who has examined the life experiences of clients with pulmonary TB. Based on critique and suggestion from the experts, the instrumen was edited. After that, the instrumen was reviewed by 5 key informants. Based on the reviewing from the key informants, the instrumen was revised and revined for clarity, simplicity, accuracy, comprehension, and appropriateness. In phase 2, the revised version of the instrumen was tested for construct validity as well as reliability. The validity and reliability testing was done for 40 respondents from 2 Puskesmas in Bandung.

Results and Discussion

The aims of this study were to develop an instrument to measure psychosocial needs of clients with tuberculosis paru. The study is divided into two phases: instrument development and a pilot project for testing the validity and reliability of the instrumen. An instrument development process and a test of the initial psychometric properties of preliminary items was conducted from April to June 2012. A pilot project was conducted to test the validity and reliability of the developed instrumen. It was conducted from July to August 2012. In this chapter, the results provides the findings corresponding to research questions.

1. Characteristics of the key informants

Key informants consisted of 3 females and 2 males. The age of participants in a key informants ranged from 19 to 35 years. Most of them were married (60 %), completed senior high school, and reported having sufficient income without saving. Three of them worked as labour and two of them are civil servant. Most of them have been diagnosed with pulmonary tuberculosis for more than 2 month.

2. Characteristics of respondents in the pilot project

The characteristics of respondents in the pilot project can be seen in the table below:

Table 1
Characteristics of respondents in the pilot project
As can be seen from the table, the majority of participants in the pilot project was female (62.5%), middle adult (45%). The participants educational background was varied. Most of them were married (50%), and most of them reported having not sufficient monthly income (77.5% reported have income less than regional minimum wage). Most of participants have no other diseases and in the first 3 month phase of treatment.

3. Expert review
In review of the instrument, ratings by 3 experts were mainly on 4 on a 1-4 scale (highly relevant), although a very few items were rated 2 (somewhat relevant) and 1 (not relevant). A content Validity Index (CVI) was also examined for the purpose of identifying the extent of agreement on all items of the instruments. It showed a score of .97 for the entire questionnaire. Suggestions and comments were returned to guide the revision and refine the developed questionnaire. Major concerns of the experts were about the integration of spiritual into emotional, because in Indonesia, the emotional and spiritual are aspects that cannot be integrated and should be divided into different components as most of Indonesian people are concern about spiritual or religion as different from emotional. Another concern is about problems relating to rethetical wordings. For instance, ‘health professional who listen to me’. This statement was considered to be misperception by the reader and it replaced with ‘Doctor/nurse spent
time to listen to my talk. Another one is item which not possibly needed by Indonesian people living with pulmonary tuberculosis. For instance, regarding item ‘Help with childcare’ were considered to be deleted as well as help with transport because both of the items are not available in health services in Indonesia.

4. Key informants interviewing
To meet face validity, interviewing with key informants was performed from April to June 2012. After signing the informed consent form, they were asked to complete the first version of the instrument, which took 45 minutes. Then, one-on-one interviews were conducted to ask about wording, clarity, and comprehension of the instrument’s items. Major comments focused on word clarification and format.

The statement ‘Help with any distressing symptom. The phrase of distressing symptoms were considered ambiguous by most of the informant. Therefore, the statement were recommended to be replaced with ‘Help with any feeling of distress that I have.’. Another one is help with any loneliness. This statement was considered to have many interpretation and therefore were replaced with ‘Help to overcome any feeling of loneliness.

5. Validity and reliability of the instrument
Cronbach’s alpha coefficients were used to estimate the internal consistency reliability of the instrument. The internal consistency reliabilities and item-total correlation coefficients were calculated for the unique scales of the constructs. They were evaluated for the pilot study as below:

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.981</td>
<td>35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
<th>VALIDITY</th>
<th>RELIABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>184.33</td>
<td>1177.647</td>
<td>.529</td>
<td>.981</td>
<td>VALID</td>
<td>Very high</td>
</tr>
<tr>
<td>P2</td>
<td>184.22</td>
<td>1172.065</td>
<td>.649</td>
<td>.981</td>
<td>VALID</td>
<td>Very high</td>
</tr>
<tr>
<td>P3</td>
<td>184.22</td>
<td>1167.712</td>
<td>.777</td>
<td>.981</td>
<td>VALID</td>
<td>Very high</td>
</tr>
<tr>
<td>P4</td>
<td>184.33</td>
<td>1177.647</td>
<td>.529</td>
<td>.981</td>
<td>VALID</td>
<td>Very high</td>
</tr>
<tr>
<td>P5</td>
<td>184.39</td>
<td>1169.781</td>
<td>.654</td>
<td>.981</td>
<td>VALID</td>
<td>Very high</td>
</tr>
<tr>
<td>P6</td>
<td>184.50</td>
<td>1176.735</td>
<td>.546</td>
<td>.981</td>
<td>VALID</td>
<td>Very high</td>
</tr>
<tr>
<td>P7</td>
<td>184.56</td>
<td>1153.908</td>
<td>.585</td>
<td>.981</td>
<td>VALID</td>
<td>Very high</td>
</tr>
<tr>
<td>P8</td>
<td>184.89</td>
<td>1145.752</td>
<td>.656</td>
<td>.981</td>
<td>VALID</td>
<td>Very high</td>
</tr>
<tr>
<td>P9</td>
<td>184.72</td>
<td>1163.507</td>
<td>.493</td>
<td>.981</td>
<td>VALID</td>
<td>Very high</td>
</tr>
</tbody>
</table>
6. The components of the psychosocial need assessment of clients with pulmonary tuberculosis

The psychosocial need assessment of clients with pulmonary tuberculosis are divide into 6 components as shown in Table 3 below:

Table 2
The components of the psychosocial need assessment of clients with pulmonary tuberculosis

<table>
<thead>
<tr>
<th>Component</th>
<th>Measures size (item)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services needs</td>
<td>6</td>
</tr>
<tr>
<td>information needs</td>
<td>7</td>
</tr>
<tr>
<td>Support need</td>
<td>8</td>
</tr>
<tr>
<td>emotional needs</td>
<td>7</td>
</tr>
</tbody>
</table>
Conclusion

Results of this study documented the assessment of psychosocial need instrument was suitable in the application for psychosocial need assessment of Indonesian people living with pulmonary tuberculosis. Nevertheless, these findings suggested for conducting cross-sectional survey in several area in Indonesia for further reliability testing.

Acknowledgements

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Reference


