Title:

Developing the Instrumen 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 problmes 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 psychososcial 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 testting (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 disesase 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 Managament 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 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 disesase 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 instrumen to assess the psychososcial 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; Venkatraju1 & Prasad, 2013; Williams & Kaur, 2012; Vega, Sweetland, Acha, Castillo, Guerra, Smith, Fawzi & Shin, 2004). Then, the modified intrumen 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 instrument 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 instrument. 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

(n = 40)

Variabel	Amount	Prosentase (%)
age		
▪ Early adult	11	27.5
▪ Adult	18	45
▪ Late adult	11	27.5
Sex		
▪ Female	25	62.5
▪ Male	15	37.5
Education		
▪ Higher	4	10
▪ Senior high school	11	27.5
▪ Junior high school	15	37.5
▪ Elementary school	10	25
Married status		
▪ Not Married	14	35
▪ Married	20	50
▪ Widow	6	15
Income		
• Less than regional minimum wage	31	77.5
• More than regional minimum wage	9	22.5
Other diseases		
• Yes	7	22.8
• No	33	77.2
Treatment phase		
• First 3 month	26	65
• The second 3 month	12	30
• The third 3 month	2	5

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 disesase 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 rethetorical 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 pulmonrary 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-onone interviews were conducted to ask about wording, clarity, and comprehension of the Instrumen’s items. Major comments focused on word clarification and format,

The statement ‘Help with any distressing simptom. The phrase of distressing simptoms were considered ambigue 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 intrument. 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:

Reliability Statistics

Cronbach's Alpha	N of Items
,981	35

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	VALIDITY	RELIABILITY
P1	184,33	1177,647	,529	,981	VALID	Very high
P2	184,22	1172,065	,649	,981	VALID	Very high
P3	184,22	1167,712	,777	,981	VALID	Very high
P4	184,33	1177,647	,529	,981	VALID	Very high
P5	184,39	1169,781	,654	,981	VALID	Very high
P6	184,50	1176,735	,546	,981	VALID	Very high
P7	184,56	1153,908	,585	,981	VALID	Very high
P8	184,89	1145,752	,656	,981	VALID	Very high
P9	184,72	1163,507	,493	,981	VALID	Very high

P10	184,89	1154,340	,536	,981	VALID	Very high
P11	184,44	1167,673	,490	,981	VALID	Very high
P12	184,78	1148,418	,638	,981	VALID	Very high
P13	184,72	1143,742	,681	,981	VALID	Very high
P14	184,83	1136,147	,802	,980	VALID	Very high
P15	185,06	1128,526	,839	,980	VALID	Very high
P16	184,72	1146,095	,729	,981	VALID	Very high
P17	184,39	1164,487	,797	,981	VALID	Very high
P18	184,78	1160,889	,488	,981	VALID	Very high
P19	184,72	1140,683	,765	,981	VALID	Very high
P20	184,67	1151,882	,657	,981	VALID	Very high
P21	184,72	1149,154	,682	,981	VALID	Very high
P22	184,39	1166,605	,740	,981	VALID	Very high
P23	184,94	1125,585	,813	,980	VALID	Very high
P24	184,67	1143,176	,797	,980	VALID	Very high
P25	184,61	1140,134	,817	,980	VALID	Very high
P26	184,94	1124,056	,801	,980	VALID	Very high
P27	184,72	1142,212	,743	,981	VALID	Very high
P28	185,22	1102,654	,834	,981	VALID	Very high
P29	184,78	1132,771	,747	,981	VALID	Very high
P30	184,56	1149,908	,742	,981	VALID	Very high
P31	185,11	1118,340	,895	,980	VALID	Very high
P32	184,72	1139,389	,835	,980	VALID	Very high
P33	184,89	1131,869	,901	,980	VALID	Very high
P34	184,33	1166,824	,699	,981	VALID	Very high
P35	184,56	1151,556	,714	,981	VALID	Very high

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

Component	Measures size (item)
Services needs	6
information needs	7
Support need	8
emotional needs	7

spiritual needs	6
practical needs	6

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.

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