

# HEALTH CARE SEEKING BEHAVIOUR OF COMMUNITY AND TB PATIENTS, AND CAPABILITY OF NONFORMAL HEALTH SERVICES PROVIDER IN TANJUNG BINTANG SUBDISTRICT, INDONESIA

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In Lampung province, Indonesia, the case detection rate (CDR) has not reached the national target of 70%. This suggests that tuberculosis (TB) case finding is insufficient. In Tanjung Bintang subdistrict (Lampung) the CDR was only 27.8% in 2007. This study aimed to identify the reasons for the low CDR in Tanjung Bintang subdistrict. In an explorative study design we assessed health care seeking behavior of community members who were selected by systematic random sampling. We also assessed health care seeking behavior of all TB patients that were registered between 2001 and 2007 in the subdistrict public health center (PHC). To assess the diagnostic capacity of non-formal Health Service Providers (HSP), we interviewed all HSP in the subdistrict. Data analyzed descriptively using Epi-info. Community members mentioned that they would first visit midwives (31%), paramedics (18.8%) and subhealth centers (18.8%) for mild symptoms. Most TB patients (97.5%) reported that they initially visited a nonformal HSP for their symptoms. Most (85.2%) nonformal HSP have poor knowledge about general TB especially for symptoms and 45.8% of them refer TB patients to a private practitioner or private hospital rather than to the PHC (54.2%). Community members and TB patients frequently seek care with nonformal HSP. Since most nonformal HSP have poor knowledge of TB and do not refer TB patients to the PHC many TB patients may remain not reported. The fact that patients do not seek health care at PHC and nonformal HSP are not capable of diagnosing TB can both explain the low CDR in Tanjung Bintang subdistrict.

**Keywords:** health seeking behaviour, community, TB patient, nonformal HSP

## BACKGROUND

Tuberculosis (TB) is still an important public health problem. More than a third of the world's population is affected by *Mycobacterium tuberculosis*. Indonesia is the fifth country in the world with the highest TB burden<sup>1</sup>. There is a big variation of TB prevalences between provinces in Indonesia. The lowest smear positives prevalence is found in Java-Bali (64/100.000 population), in Sumatra 160/100.000 and the highest in the eastern part of Indonesia (220/100.000 population)<sup>2</sup>.

In Lampung province, the Directly Observed Treatment Shortcourse (DOTS) strategy has been implemented since 2005, and currently 98.7% of

the public health centers (PHC) have trained staff where TB patient are registered<sup>1</sup>. In spite of the high participation of TB program in PHCs, case detection rate (CDR) has only reached 40.6% in 2007, which is still far from the national target. One of the lowest CDR was found in the South Lampung district. The TB program of this district has reported a CDR of 40.4% in 2007. Reasons for this low prevalence may be because 1) behaviour and practices of community members, health seeking behaviour is not appropriate to get patients into TB care system; 2) there is inadequate access of the PHC because of geographical problems; or 3) there is inadequate involvement of other health service providers (HSP) to refer TB patients to DOTS program or 4)

the real prevalence of TB is lower than the estimated figures<sup>34</sup>.

Tanjung Bintang Subdistrict has the largest population in the district (87.642 population), and covers a wide area of 24 villages in 305 km<sup>2</sup> area. In this subdistrict, there is 1 PHC which provide DOTS program TB care. Based on the population, the expected number of TB suspects is 1.436 persons per year. In 2007 however only 462 suspects (32%) notified, Subsequently 36 Acid Fast Bacili (AFB) positive TB patients were reported of the 99 targeted<sup>5</sup>. Besides the PHC, health cares may also be provided by private HSP which consist of company clinic, private clinic, private practitioners (physician, nurse and midwife). This study is conducted to identify the reasons for the low CDR in Tanjung Bintang subdistrict.

## **METHODS**

This is an explorative study conducted to community, registered TB patient and nonformal HSP in July 2007.

Tanjung Bintang subdistrict with 87.642 population is the largest subdistrict in South Lampung Distric. Inhabitants are distributed in 24 villages. Human resource in Tanjung Bintang Health Centre is considered adequate with 1 general physician, 1 dentist, 1 laboratory analist, 17 nurse and 7 midwives. To be able to perform its duties, this health center is supported by 8 subhealth centres<sup>3</sup>.

Community member means people living and registered in Tanjung Bintang subdistrict. The informant representing the community would be the head of the household or the housewife from the family. TB patient is patients with positive AFB registered in PHC subdistrict in year 2001-2007. Nonformal HSP is person that provide health services to community after hour. This includes private doctor, private nurse and private midwife in Tanjung Bintang subdistrict.

Pretesting has been done in one of village in Natar District that have the same characteristic with study population. The result of pretesting would be used to revise questionnaires.

Sample size of respondent from community member were determined with Rapid Survey, a statistical method to gather field data in community based survey done in short time<sup>8</sup>. We have done mapping of 24 villages and 145 subvillages (each village had 5-7 subvillages). Subvillages divided into 30 clusters with random. Each clusters would be selected 10 respondents with systematic random sampling based on multiply number of household in draft. The sample size of respondents were 300 respondents. Data collection was conducted with structured interview with questionnaires.

All TB patients registered in the subdistrict PHC in the last year 2001- 2007 visited to be interviewed. Data collection by interviewing respondent using structured questionnaires. For the community respondent and TB patient, data regarding basic characteristics, practices for health seeking were collected.

All non formal HSP registered in research area visited to be interviewed by structured questionnaires. Variables collected were knowledge about TB symptoms and diagnosed, and what was done for the TB suspects/patients.

Interview was done by researcher with research assistants (medical and public health student).

Quantitative data obtained were double entered and checked for errors, processed and analyzed descriptively using Epi-info.

Ethical approval obtained from the Research and Development Health Institution, Faculty of Medicine Padjajaran University. All research respondents got complete description regarding the research of and give their informed consent.

## RESULTS

The survey identified 30 clusters with each 10 respondents (N=300) selected by systematic random sampling. Successful data collection was 293 community member, 7 participants failed to be interviewed because not found in their house after 2 or 3 times visits.

TB patients that registered in Tanjung Bintang health center from year 2001-2007 was 138 patients. They distributed in all villages and we visited them to be interviewed as respondents. Only 81 respondents could be interviewed because the address not traced (11 patients), moved (31 patients), died (14 patients) and psychopathic (1 patients).

Based on data from subvillage and Tanjung Bintang health center in 2007, number of HSP registered were 82 places. Distribution of HSP spread in each villages, PHC located in Jati Baru village and other nonformal HSP i.e subhealth center, private clinic, company clinic, private doctor, private midwife and private nurse. Twenty eight respondent not successful visited because 19 persons not permanently lived in Tanjung Bintang, 7 individuals moved and 2 participants not provide services again. Total respondents interviewed were 54 respondents.

Most community respondents was male (73.7%), age 30-47 years old (51.9%) and in elementary education (55.4%). The most common occupation was farming (38.2%) and income Rp 300.000-600.000 (43.7%).

The characteristic of TB patients for sex was male (58%), age 30-49 years old (39.5%) and education in elementary school (51.9%). Main occupation as farmer (43.4%) and income Rp 300.000-600.000 (48.1%) (Table 1).

**Table 1 :** Characteristic of community members and TB patients

Characteristics	Community member (N=293) n (%)	Tbpatient n (%)
<b>Sex</b>		
Male	216 (73.70)	47 (58.0)
Female	77 (26.3)	34 (42.0)
<b>Age (in years)</b>		
< 30	71 (24.2)	20 (24.7)
30 - 49	30 (49)	32 (39.5)
> 49	70 (26.2)	29 (35.8)
<b>Education</b>		
No schooling	60 (20.5)	24 (29.6)
Elementary school	163 (55.4)	42 (51.9)
Higher education**	71 (24.1)	15 (18.5)
<b>Occupation</b>		
Farmer	112 (38.2)	33 (43.4)
Labourer	59 (20.1)	15 (19.7)
Housewife	39 (13.3)	10 (13.2)
Private sector employe	65 (22.2)	16 (21.1)
Other	18 (6.1)	2 (2.6)
<b>Income (In Rupiah)*</b>		
< 300.000	73 (24.9)	25 (30.9)
300.000 - 600.000	128 (43.7)	39 (48.1)
> Rp. 600.000	92 (31.4)	17 (21.0)

\* 1USD = Rp. 9.000,- (in 2007)

\*\*Higher education is high school, diploma and S1

Health seeking behaviour of community if they felt mild symptom such as cough < 1 week or fever < 2 days were got self help first (86%) with buy medication. The most place usual buy medication was small store (96.8%) and paracetamol was one example medication (46.1%). If the symptoms still persisted with self medication, we asked respondent back which HSP chosen as other alternative to get treatment (we gave examples moderate symptoms such as coughing more than 1 week or fever more than 2 days). The first HSP that usual visited by community after self help not reduce symptoms was private midwife. Other alternatives health services were subhealth centers, private nurse, company clinic and private

clinic. Only few respondents that visited PHC as main health services if need treatment (Table 2). The most reason in seeking medication to the HSP chosen was near to their residence and cheap (62.2%). Few respondents not confident to PHC (2.4%). The results of a study in Vietnam showed that the most common first health care contact for the disease episode was a private health care provider<sup>7</sup>. There is a substantial number of TB patients unreached by the TB program. They may utilize health services providers other than PHC such as private health services that do not report TB patients to the program<sup>8</sup>

**Table 2 :** First health service provider chosen by community member if they would have mild symptoms, and first health service provider utilized by TB patients when their symptoms started.

Health services provider	Community member (N = 293) n (%)	TB patient (N = 81) n (%)
Health center*	25 (8.5)	2 (2.5)
Subhealth center*	55 (18.8)	8 (9.9)
Private hospital	5 (1.7)	18 (22.2)
Private clinic	17 (5.8)	1 (1.2)
Company clinic	29 (9.9)	6 (7.4)
Private doctor	15 (5.1)	6 (7.4)
Private nurse	55 (18.8)	18 (22.2)
Private midwife	92 (31.4)	21 (25.9)
Traditional healer	0 (0.0)	1 (1.2)

\*governmental

The duration of having TB symptoms after starting TB treatment in PHC was various. Thirty six patients had symptoms of TB for 4 week or less before got treatment in health center, other 5 until 24 weeks (17.3%). Health seeking behaviour of TB patients can be described as where first place to get treatment. First place utilized by TB patients was midwife (25.9%), private nurse (22.2%) and hospital (22.2%). Only 7 patients choosed health center as first treatment, and increase as second place (33 patients) and third place as last treatment

(78 patients). The reason TB patients determined utilization of HSP to get treatment based on near to their house (33.3%),

Fifty percent respondents had provide health services approximately 5 years and 27.8% more than 10 years. Only 20.4% got training about TB. Knowledge of respondent measured by calculating 8 basic questions about cause of TB, symptoms, transmission and diagnosis. Knowledge categorized good if respondent could answer 8 questions with right answer. Most of knowledges of respondent were poor (85.2%). The question that always wrong or could not be answered was about symptoms of TB. To asses about attitude, we asked 6 questions covered direct monitoring in consuming medication, smear examination for diagnosis, isolated TB patient, family support and active participate of health worker. Thirty six participants (66.6%) answered right and categorized in good attitude (Table 3).

**Table 3 :** Capacity of health service provider (HSP) to identify tuberculosis (TB)suspects and to diagnose TB

Capacity of nonformal Health Service Provider	Number (N - 54) n(%)
Received training about TB	
Yes	11 (20.4)
No	43 (79.6)
Knowledge of TB symptoms	
Poor	46 (85.2)
Good	8 (14.8)
Knowledge of TB diagnosis	
Poor	18 (33.4)
Good	36 (66.6)
Did HSP provide services to TB suspects/patients in last 3 months	
Yes	35 (64.8)
No	19 (35.2)

We asked to respondent that ever provide services to TB suspects/patients in last 3 months. Thirty five respondents (64.8%) answered yes mean that

they ever provided TB suspect/patients. From 35 non formal HSP, 5 participants were visited by TB patient that diagnosed before in health center and 30 participant got TB suspects based on clinical symptoms. To TB suspects/patien, respondent referred 19 patients (54.2%) to health center, 14 patients (40%) to hospital, 1 patients (2.9%) to internist and 1 patients (2.9%) given medication only (Table 3).

Fourteen respondent that referred TB suspects/patients to hospital, 5 respondent lived in Way galih, 1 in Sukanegara and 1 in Lematang. That 3 villages so far from health center but had bordered to Bandar Lampung city (private hospital could be reached in 15 minutes by motorcycle). Five from 7 respondent that refer to hospital had been working in health center with poor knowledge and had never been got training related to TB. Other 2 respondent had been working in private clinic. Private health care providers play an important role in detection and treatment of TB patients. A study in India, has shown that the majority of TB patients, including people from very low income strata, are managed within the private sector<sup>9</sup>

Most of participants (92.6%) would participate in TB program but which role done still had variation and unfocus. Most of them would involve in health promotion (42%). Only few revealed to participate in detection or diagnosis (4%). The advantages expected if involved in TB program is to increase knowledge of TB (48.1%), to decrease incidence of TB (22.2%) and to prevent the transmission (18.5%), the statement

still not focus in implementation DOTS. It is important to clearly define the role of community health workers in their local setting. In most situations, diagnosis and prescription of treatment must remain the responsibility of the health professional<sup>10</sup>.

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