

Influence knowledge and behavior of TB medical personnels' concordance principle based communications skill at primary healthcare, Medan, Indonesia

A S Wahyuni^{1*}, N N Soeroso², I Alona¹, Y Yunanda¹ and I Siregar¹

¹Department of Public Health/Public Prevention/Community, Medical Faculty, Universitas Sumatera Utara, Medan, Indonesia

²Medical Faculty, Universitas Sumatera Utara, Department of Pulmonology and Respiratory, Medan, Indonesia

*Corresponding author: dr_arlinda_123@yahoo.com

Abstract. Concordance behavior of TB management is a form of collaboration among doctors, personnel, and patients in treating TB. Approval among them could be achieved if credibility and policy occur. This study is aimed to analyze the influence of TB medical personnel's concordance behaviour principle to patient obedience at primary health care in Medan. The design of this study was quasi experimental, focusing on interventional primary health care, which is those who applied concordance behaviour principle to non-interventional primary health care. The population is TB patients, starting from 18 years old, TB category I with positive Acid Fast Bacilli Smear Test (AFBST), and taking TB regimens at Medan. Seventy-four patients were selected to be samples. They had undergone interview based on validated concordance principle, knowledge, behavior, and treatment. Data were analyzed using *chi-square*. The percentage of knowledge, behavior of TB patient to the treatment is higher on interventional primary health care than noninterventional ones. Treatment awareness based on concordance principle is expected to planish DOTS-based TB programs.

1. Introduction

WHO claimed that incidence of worldwide TB was approximately 9 million people; 1.5 million of them died of it. Most of the TB patients (85%) lived in developing nations, such as Asia and Africa, and about 75% of them is in the productive group (15-50 years old). Recently, Indonesia is ranked 4th for TB patients' amount, following India, China, and South Africa.[1]

TB management in primary health care has been concerned, even more. Primary health care in Medan has got special medical personnel to serve TB patient.[2] Otherwise, their roles seem less maximal. They whom be treated complained of not obtaining obvious explanation about disease and treatment. In addition, medical personnel have not been constantly elaborating for those whom already been in the late stage. Patients usually tend to receive the regimens without understanding the side effects. Therefore, the incidence of Multi-Drug Resistance (MDR) could be increased if not properly consumed.

Appropriate treatment consists of adequate dosage, duration, and guidelines, depending on the behavior of TB patients and medical personnel. The best therapeutic behavior is when concordance among medical personnel appeared. Concordance behavior of TB management is a form of collaboration among doctors, personnel, and patients in treating TB. Approval among them could be



achieved if credibility and policy occur. Concordance is focusing on consultation, which doctors, patients, and personnel could achieve a mutual consent about the treatment that based on partnership principle.[3,4,5] This would raise patient adherence behavior which means a full commitment to taking the treatment.

So far, the study of concordance in TB management is still limited. The previous study demonstrated a correlation between concordance behavior principle based communications skill and TB patient behavior. Nevertheless, counseling and social time provided in primary health care are still limited.[6] Also, the quality of interaction between medical personnel-patient is yet optimal, in which doctors tend to be in a hurry to treat chronic diseases, especially TB. Inadequate consultation, mostly doctors' roles are considered more dominant than those who do not comprehend the issues.[7] This study is aimed to analyze the influence of TB medical personnel's concordance behavior principle to patient obedience at primary health care in Medan.

2. Method

The design of this study was quasi-experimental, focusing on interventional primary health care, which is those who applied concordance behavior principle to non-interventional primary health care. Seven primary health care has been purposively chosen as interventional ones that apply concordance principle based communications skill, compared to non interventional ones. The medical personnel have been trained to communicate based on guideline's concordance principle, which has been designed by the earlier study.[8] The ongoing study has been approved by Medical Faculty of the University of Sumatera Utara and Research Ethical Committee of General Hospital of Haji Adam Malik.

The population is those with pulmonary TB category I, starting from 18 years old. Samples are part of the population who met the inclusion criteria: those with positive Acid Fast Bacilli Smear Test (AFBST), starting from 18 years old, and informed consent approved. The exclusion criteria included TB patient with a chronic disease such as cancer, HIV, diabetes mellitus or on steroid medication.

Minimal samples were calculated using 2 population hypothesis test. Value α and β equal to 5% and 20% for the phase 1, respectively. They had been interviewed using validated structured questionnaires, consisted of knowledge, behavior, management and personnel' interpersonal concordance communication questionnaire. Total samples are 39 patients from interventional primary health care and 34 patients from non interventional primary health care.

Data from this study were analyzed using a computer program, including *chi square test* and *t test for the bivariate analysis*.

3. Result

This study was started from July until October 2016 at seven interventional primary health care in Medan, which are: Belawan, Amplas, Teladan, Helvet, Johor, Padang Bulan, and Denai, and non interventional primary health care, which are: Medan Deli, Selayang, Pasar Merah, Sentosa.

Table 1. Characteristics of the respondents included gender, age, education, income, job, ethnic, and marital status.

Characteristic	Interventional n=39		Non Interventional n=35	
	Total	Percentage	Total	Percentage
Gender				
Male	24	61.5	25	71.4
Female	15	38.5	10	28.6
Age				
Young (18-40 years)	21	53.8	17	48.6
Adolescence (40-59)	13	33.3	11	31.4
Elder (≥ 60 years)	5	12.8	7	20.0

Education				
Low (SD, SMP)	10	25.7	16	45.7
High (SMA, D-III, S1)	29	64.3	19	54.3
Family Income				
Low (< 2 million)	27	69.2	24	68.6
Moderate (2-5 million)	11	28.2	10	28.5
High (≥5 million)	1	2.6	1	2.9
Job				
Unemployed	8	20.5	8	22.9
Employed	31	79.5	27	77.1
Race				
Bataknesse	13	33.3	21	60.0
Javanesse	10	25.6	10	28.6
Minang	10	25.6	0	0
Malay	5	12.9	2	5.6
Aceh	1	2.6	1	2.9
Etc	0	0	1	2.9
Marital Status				
Married	25	64.1	21	60.0
Not married	14	35.9	14	40.0
Household				
1-2	1	2.6	3	8.6
3-4	12	30.8	15	42.9
>4	26	66.6	17	48.5

The results demonstrated most of the respondents are men: interventional group (61.5%) or non interventional group (71.4%); most of them are young: interventional group (53.8%) or non interventional group (48.6%). The elderly was 12,8% of the interventional group and 20% of the non interventional group. Based on the educational background, it was known that 64.3% of the interventional group and 54.3% of the non interventional group had higher education. Generally, patients that had their income <2 million is 69.2% of the interventional group and 22.9% of the non interventional group. Most ethnic on both group is Bataknesse: which is 33.3% of the interventional group and 60% of the non interventional group. Those who is considered working as 79.5% of the interventional group and 77% of the non interventional group. For marital status, most are married 64.1% of the interventional group and 60% of the non interventional group. Based on the amount of people in the family, most are 66.6% of interventional group and 48.5% of non interventional group had >4 family members.

Table 2. Comparison of knowledge, behaviour, and action of management score between interventional and non interventional primary health care.

		Primary Health Care				<i>p-value*</i>
		Interventional		Non Interventional		
		n	%	n	%	
Knowledge						
	Good	32	59.3	19	41.3	0.954
	Poor	22	40.7	27	58.7	
Behaviour						
	Good	34	63	19	41.3	0.031
	Poor	20	37	27	58.7	

Chi square

The percentage of knowledge, behaviour of TB patient is higher on interventional primary health care than non interventional ones. There is different behavior from interventional versus non interventional primary health care in Medan ($p < 0.05$).

4. Discussion

The results showed that 54% has a good concordance on TB management in Medan primary health care. In contrast, the study by Patriani showed 35.1% concordance in Mataram General Hospital. [7] In this study, concordance includes developing effective communication based on partnership principle, openness, empathy and support between medical personnel and TB patient. It could build the trust so that patient will be honest about how they feel and will cooperate with TB medical personnel in treating their illness. The requirements that must be fulfilled in a concordance are power sharing consulting, opening discussion by any chance, adequate information, fair and equitable discussion, and adequate timing. [5] Patient handled the trust of their health problem to the medical personnel, then they will build the concordance with partnership communication, facilitating the patient to take part with clear intention. [9]

In this study, a good concordance is related to the attitude and action of TB patient undergoing their medication, but not related to the patient knowledge. Most (51%) of patient knowledge is good, which is caused by the information received by the patient from many sources, not only from the medical personnel. It is in accordance with the study by Patriani (2013) that stating the association between concordance and patient's management attitude and behavior. [7] Besides that, Rugun et al. stated the connection between medical personnel and medication personnel (PMO) with the obedience in taking the medication of TB patient in Medan primary health care ($P < 0.05$). [10] A good concordance will increase patient's medication obedience three to four times better. This will cause higher adherence or patient's obedience compared to a less concordance. So that patient will have commitment, motivation, and responsibility on their illness and its treatment. This is actually needed in treating medication of chronic illness like TB. They must understand and be responsible with their illness. Both being responsible and higher commitment will also prevent their environment from TB and MDR which treatment is complicated and take a really long time (2 years).

The result of this study could be a base for governor to increase the management quality on TB patient by developing concordance behavior from TB medical personnel in primary health care, for they are the first line who has important influence in managing medication behavior of TB patient. [11]

5. Conclusion and Suggestion

Most of the concordance behavior, knowledge, attitude and action are included in good performance group. There is a connection between concordance and attitude and action in TB medication. However, there is no relation between the concordance and the knowledge of TB patient about their disease and medication.

It is necessary to improve the skills of TB officers in good communication based on concordance by developing communication behavior which is partnership, open, positive, supportive and empathy.

References

- [1] World Health Organization (WHO) 2014 *Global tuberculosis control report 2014* (Geneva, Switzerland: WHO)
- [2] Riset Kesehatan Dasar (Riskesdas) 2013 Badan penelitian dan pengembangan kesehatan kementerian kesehatan RI tahun 2013
- [3] Departemen Kesehatan Republik Indonesia 2007 *Pedoman nasional penanggulangan tuberculosis cetakan 8* (Jakarta: Depkes RI)
- [4] National Co-ordinating Centre for NHS Service Delivery and Organisation R & D (NCCSDO) 2005 Concordance, adherence and compliance in medicine taking
- [5] Benson J 2005 Concordance, an alternative term to 'compliance' in the aboriginal population *Austr. Fam. Physic.* **34**(10)

- [6] Perhimpunan Dokter Paru Indonesia 2011 *Tuberkulosis pedoman diagnosis dan penatalaksanaan di Indonesia* (Jakarta: Indah Offset Citra Grafika)
- [7] Patriani I and Ayuningtyas D 2013 Komunikasi dokter dengan sikap konkordansi pada pasien tuberkulosis paru, hipertensi, asma *Jurnal Kesehatan Masyarakat Nasional* **2(8)** 51-5
- [8] Sastroasmoro S and Ismael S 2012 *Dasar-dasar metode penelitian klinis* (Jakarta: Sagung Seto)
- [9] Wahl C, Gregoire J P, Teo K, Beaulieu M, Lebel S, Leduc B, *et al.* 2004 *Concordance, compliance and adherence in health care* (Canada: closing gaps and improving outcomes)
- [10] Rugun H N N, Amir Z A, Abidin A, Aman T N and Wahyuni A S 2014 Faktor yang berhubungan dengan gagal konversi pasien TB paru kategori I pada akhir pengobatan fase intensif di Kota Medan *Majalah Kedokteran Nusantara*
- [11] Kementerian Kesehatan Republik Indonesia 2011 Strategi nasional pengendalian TB di Indonesia 2010-2014 (Jakarta: Direktorat Jenderal pengendalian Penyakit, dan Penyehatan Lingkungan)
- [12] Kementerian Kesehatan RI 2011 Rencana aksi nasional: advokasi komunikasi dan mobilisasi sosial pengendalian tuberkulosis Indonesia 2011-2014 (Jakarta: Direktorat Jenderal Pengendalian Penyakit dan Penyehatan Lingkungan)