



APPLICATION OF NURSING MANAGEMENT: HORAS PROGRAM TO IMPROVE COMPLIANCE PULMONARY TUBERCULOSIS MEDICATION

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Abstract

Objective: To improve the medication of patients with pulmonary tuberculosis by setting up a nursing facility within framework of HORAS program, which stands for Health belief, Observation, Relaxation, Action, and Supporting. **Method:** Quasi-experimental design with a cross sectional, from 11 May to 31 July 2020 in Community Health Center Medan Johor and Medan Amplas. Samples were 52 nurses that received informed consent using total sampling technique. Pre-test and post-test with Google form that contains an overview of questionnaires for nursing management. Value of validity was 0.80 and reliability 0.87. Furthermore, ethical test was carried out by the ethics committee of Faculty of Nursing, USU. **Result:** The application of nursing management in treatment of pulmonary tuberculosis showed Good results 27 (51.9%), Fairly 17 (32.7%), and less 8 (15.4%). **Conclusion:** Application of HORAS program for the treatment of pulmonary tuberculosis in Medan Johor and Medan Amplas community health center is effective.

Keywords: HORAS, Management, Nursing, Pulmonary Tuberculosis

Introduction

Pulmonary tuberculosis is a potentially serious infectious diseases that mainly affects the lungs. Furthermore, it is a contagious disease that is transmitted from one person to another, which is caused by Mycobacterium tuberculosis bacteria that belongs to a specie's of a strong Bacillus bacterium. Therefore, healing processes takes a long period of time.¹

The high incidence of pulmonary tuberculosis, especially in developing countries, remains a global concern. World Health Organization (WHO), declared this diseases as a global emergency in 1993 and reported about 10.4 million cases globally which increases from the previous figure of about 9.6 million. Indonesia was rank second with about 1.02 million cases of pulmonary tuberculosis cases after India with about 2.8 million cases, and China with 918 thousand cases.³

The causes of high rate was due to the low compliance of patient medication.⁴ One of the most important factors influencing the success of treatment was patient's compliance with taking medication⁵, which is influenced by several factors such as knowledge and attitude.⁶

Nurses are health workers that are directly related to patients, and to overcome the problem of patient compliance with medications, skills needs to improve. However, to ensure success of a business, management must be carried out based on principles, and modern management functions of planning, organizing, implementing and monitoring (evaluation).⁸

Strengthening skills of nurses in pulmonary tuberculosis control to improve drug compliance can be done by implementing nurse management in application of HORAS



program. Furthermore, HORAS means safe in Bahasa and in English means Health belief, Observation, Relaxation, Action, and Supporting. The meaning of HORAS here is cured, or free from pulmonary tuberculosis disease.

Health belief is an effort to strengthen people's belief that there was an attempt to avoid pulmonary TB disease. **Observation** includes assistance of Medication Ingestion Supervisor (PMO), the ability to manage medication schedules, taking medications, and independent healthy goals such that patient is expected to have the ability for self-monitoring. **Relaxation** is an effort to make patients independent, such as For example, taking TB medication calmly, controlling anger, planning activities, praying, dealing with ailments in a more relaxed manner. **Action** is a way of training patients by taking care of themselves and being obedient in taking medications and **support** to be aware of the factors that are preventing patients from taking care of themselves.

HORAS education technique is a form of nursing intervention in the community in which the training is a combination of comprehensive/holistic techniques that strengthen awareness, independence, and changes in healthy behavior for pulmonary tuberculosis patients because it is a combination of physical, psychological, social, and spiritual.

Method

This research was an experimental study with a cross sectional approach conducted from May 11 to July 31, 2020 in Medan Amplas and Medan Johor North Sumatra Community Health Center. 52 people were interviewed using a total sampling technique and pre-test and post-test with a Google form that contains an overview of questionnaires for nursing management was used. The value of validity was 0.80 and reliability 0.87.

Respondents received pre-test and a post-test that contains nursing functions, such as

planning, organizing, implementing and evaluating the treatment of pulmonary tuberculosis. Respondents were treated within the framework of HORAS program in form of nursing management. Ethical clearance No. 2166/VI/SP/2020 from Faculty of Nursing USU was obtained.

Planning

- Assessment of patients with pulmonary tuberculosis: diagnosed, relapsed due to withdrawal and drug resistance.
- Building patients trust.
- Asking the patient for further assessment
- Identify and formulating problems
- Determining the patient's strengths/weaknesses
- Developing objectives and outcome criteria

Organizing

Division of duties according to the main tasks and functions.

Implementation

a. Health Belief

- Assessment of physical, psychological, social and spiritual complaints.
- Motivating patient to accept themselves and making sure pulmonary TB can be cured.
- Providing health education using supportive media

b. Observation

- Drug Ability Observation Sheet, which includes PMO support, the ability to set a medication schedule, taking medication, and independent healthy targets.
- Encouraging patients to regularly take medication on time, training the PMO to always remind patients and always monitoring patients, and observing medications compliance through a provided treatment card provided by the community health center.
- Providing health education using posters on duties and the importance of preventing pulmonary tuberculosis for PMO.



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- c. Relaxation
- a. Diarangi mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan sumbernya.
 - b. Pengutipan tidak mengikan kepentingan pendidikan, penelitian, penulisan karya ilmiah, penyusunan laporan, penulisan kritik atau tinjauan suatu masalah.
 - c. Asesing keluhan seperti nyeri dan faktor-faktor yang memperburuk, tanda verbal-non verbal nyeri.
 - d. Instruksikan pasien agar tidak bosan saat menerima pengobatan dan ajarkan pasien dan PMO dengan demonstrasi teknik relaksasi napas dalam menggunakan poster.
 - e. Action
 - f. Membantu pasien untuk mengubah perilaku.
 - g. Mengajar pasien dan PMO untuk mempraktikkan etika yang baik menggunakan media poster.
 - h. Supporting
 - i. Melatih dan memotivasi keluarga/PMO dalam memfasilitasi perawatan diri pasien.
 - j. Mengajak keluarga/PMO untuk mendukung diet/nutrisi pasien.
 - k. Advise pasien dan PMO untuk berkonsultasi dengan tenaga kesehatan ketika mereka menemukan efek samping obat.
 - l. Evaluation
 - m. Evaluasi teknik edukasi HORAS untuk mengetahui apakah dapat menilai atau memantau respons dan perkembangan kondisi secara terus-menerus untuk menentukan tujuan dan kriteria untuk hasil yang diinginkan.
- Furthermore, respondent have undergone training are then given post-test. The research was carried out by conducting an ethical test by the ethics committee of Faculty of Nursing, University of North Sumatra. Informed consent was obtained after respondents were given an explanation on the objectives of the study. The analysis was explained descriptively by univariate.
- ### Results
- Results showed that application of nursing management in Medan Johor and Medan Amplas health centers is sufficient. In planning phase it was reported that activities were not coordinated on basis of planning, but directly on working area. There is no organizational step in treatment of pulmonary tuberculosis. Training of nurses, most of whom are diplomas, leads to an ignorance of nursing

management related to the division of duties. This is in line with research which states that there is a relationship between education level and performance of nurses.⁹

Furthermore, the results showed that application of nursing management in HORAS program has an impact on management of pulmonary TB to increase compliance with taking medication.

Table 1
Distribution of Pulmonary TB Management Pretest

Management Function	Well		Enough		Not good	
	n	%	n	%	N	%
Planning	5	9.6	27	51.9	20	38.5
Organizing	8	15.4	25	48.1	19	36.5
Implementation	11	21.2	20	38.4	21	40.4
Evaluation	7	13.4	19	36.6	26	50

Table 2
Post-test distribution of pulmonary TB management

Management Function	Well		Enough		Not good	
	n	%	n	%	N	%
Planning	24	46.2	20	38.4	8	15.3
Organizing	23	44.2	19	36.6	10	19.2
Implementation	28	53.9	15	28.8	9	17.3
Evaluation	27	51.9	16	30.8	9	17.3

Knowledge are facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject line, which are important factors in shaping a person's actions, and knowledge-based behavior are more sustainable.¹⁰ Furthermore, implementation of management functions in HORAS application increases the value of pulmonary TB management in the work areas of Medan Amplas and Medan Johor health centers.

Discusstion

This research shows the effectiveness of application of nursing management in applying HORAS program in treatment of pulmonary tuberculosis in order to increase drug compliance. The research is consistent with the statement that training nurse's in care management is needed, especially planning



and monitoring functions to improve the implementation of nursing care for people with infectious diseases.¹¹

To benefit health workers, families and managers, there is a need to increase medication for patients with pulmonary tuberculosis. This is in line with research showing that patients with pulmonary tuberculosis increased physical independence after an intervention with help of health care cadres. Similarly, it is very important to increase the capacity of health professionals in the treatment of pulmonary tuberculosis.¹²

The application of HORAS program is also very useful to increase adherence to treatment in patients with pulmonary tuberculosis. This is in line with research suggesting that providing education with the proposed behavioral approach has implications for the role of healthcare professionals and can increase detection rate of BTA-positive TB.¹³

Conclusion

Application of nursing affects implementation of HORAS program for treatment of pulmonary tuberculosis in the health centers of Medan Johor and Medan Amplas. Therefore, it is necessary to implement nursing management and apply HORAS program to improve patients compliance with pulmonary TB medications.

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