

CARE FOR ENDEMIC TUBERCULOSIS (CAFEKU): FACILITY OF TUBERCULOSIS REHABILITATION (AN EUDAIMONIC APPROACH)

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Abstract

The global high prevalence of Tuberculosis must be a concern, especially in Indonesia. The cases of Tuberculosis in Indonesia increase, but the Case Notification Rate (CNR) during 2011 to 2014 was stagnant due to the lack of public knowledge about tuberculosis. The behavioral changes of people with tuberculosis include depression as the result of long-term medication consumption, increased distance within family relationships and friendship, as well as difficulty in socialization due to the effect of the high disease transmission risk. As the consequences, people with tuberculosis experience low self-esteem resulting in the demotivation for consuming medicines and the decreased role both within the family and the community. The author initiates an idea to use an eudaimonic approach: Cafeku (Care for Endemic Tuberculosis) for tuberculosis patients. The rehabilitation means to exert influence through the mechanism of the search for meaning of life, individual behavior and social adjustment. The result of the eudaimonic approach can be a positive feeling, which can affect negatively to stress that occurs in people with tuberculosis. Stress and ANS-HPA have an inversely relationship. As the stress decreases, ANS and HPA increase, which supports the immune system in the body of patients with tuberculosis. The establishment of CAFEKU requires the active role of the health professionals in hospitals as well as in Government's policy.

Keywords: Cafeku, Tuberculosis, Eudaimonic.

Author's Biography



Sakinah Nur Rokhmah is an undergraduate student in Psychology Faculty, Universitas Muhammadiyah Malang (UMM). She is an active researcher in Scientific Discussion Forum (Organization of Student Research in UMM). Currently, she is an assistant in Laboratory of Psychology. She is interested to carry out researches in social, Islamic, clinical and educational psychology.

INTRODUCTION

Background

The high prevalence of Tuberculosis around the world becomes a noticeable fact, particularly the cases in Indonesia. According to the data from health.kompas.com in 2014, currently, Indonesia is ranked the fourth highest for patients with TB after China, India, and South Africa. Based on the data of 1999 to 2014, the incidence of Tuberculosis cases in Indonesia increased despite the fact that the Case Notification Rate (CNR) in 2011 to 2014 was stagnant [1]. The rate of TB is 183/100.000, there is a decline by approximately 10% from 206/100.000 in 1999 while the prevalence of TB is 272/100.000 and it declines by 33 % from the data of 442/100.000. In addition, the mortality rate of TB is 25/100.000 or there is a decline by 49 % from 53/100,000. In 2014, the case detection rate (CDR) of pulmonary TB was at 69.7 %, while the treatment success rate (success rate - SR) was 90% [1].

The treatment for tuberculosis is divided into two phases, namely the intensive (2-3 months) and the continuation phase (4-6 months) and the treatment consists of main and auxiliary regimens. The Anti Tuberculosis medication is the first step of a curative therapy. Most frequent treatment for tuberculosis cases is 6 months treatment. The medication package consists of the intensive stage and advanced stage. Intensive phase consists of RHZ (Rifampicin (R), isoniazid (H), Pyrazinamide (Z)), while the second step consists of RH (Rifampicin (R) and Isoniasid (H) [2].

The lack of public knowledge regarding with tuberculosis becoming the thing that causes the high prevalence of tuberculosis within the society. In general public, the awareness on the dangers of tuberculosis is very low. Even the occurrences of coughing up blood, high fever, and other clinical manifestations of tuberculosis are considered as common and harmless. In fact, the transmission of tuberculosis is very easy, it can be transmitted through saliva, air, and wound, even eating and drinking one container with tuberculosis patients [3].

As the medical diagnosis of positive tuberculosis is declared, the psychological changes usually occur in people with tuberculosis who previously have inadequate knowledge dealing with this disease. According to Purba, *et. al* [4], the changes can be seen on the daily lives of people with TB, ranging from depression as the result of long-term medication consumption, the increased distance within family relationships and friendships, and social challenges due to the effects of high disease transmission risk. Thus, it is common that people with TB will endure decreased self-esteem that affects on the motivation for taking medicine for curative process and the individual involvement in the family or the community.

In several researches, the eudaimonic approach has been evidenced to provide positive effects on the recovery process of the patients with TB. The effect of eudaimonic approach is performed through the mechanism of the search for meaning of life, the behavior of individuals and how individuals adapt to the environment. Two important aspects in eudaimonic approach are the improvement of immune responses and the development of healthy behavior, both of these aspects are able to support the rehabilitation of patients with tuberculosis [5].

The application of eudaimonic approach in the provision of tuberculosis rehabilitation which gives effect through the mechanism of the search for meaning of life, the behavior of individuals, and how individuals adapt to the environment should be investigated. Based on the background, the problem formulation in this study was how to implement the eudaimonic

approach in the provision of the rehabilitation of tuberculosis patients. Thus, it can help in the rehabilitation process of people with tuberculosis.

Objective

The aim of this paper was to establish a new method in the rehabilitation process for tuberculosis patients by using the eudaimonic approach. Subsequently, this method is expected to improve the life expectancy of patients with tuberculosis.

Methods

This study was a literature study. Data was obtained from many sources including journals, magazines, books, scientific articles, personal communication, and other sources that are relevant to the topics discussed in this study.

LITERATURE REVIEW

Tuberculosis

Tuberculosis is an infectious disease caused by the bacterium of *Mycobacterium tuberculosis*. Most of the tuberculosis bacillus infects the pulmonary organs, but can also infect other organs. Tuberculosis is preventable and treatable. Slender rod-shaped tuberculosis bacilli straight, but sometimes slightly curved, with a length of 4 μ m and 2 μ m-wide-0,5 μ m 0,2 μ m. These organisms do not move, do not form spores, and are not encapsulated, when dyed will be seen in the form of beads or granular. These germs are obligate aerobic and slow growth. It takes 18 hours to grow and proliferate in regular culture medium can be seen within 6-8 weeks [6].

Tuberculosis can be spread freely in the air through the system droplet, namely the entry of bacteria through the respiratory system. When a person with pulmonary tuberculosis patient coughs, sneezes, or spits, will be very easy for the tuberculosis bacteria is mixed together so that the free air infecting another individual. People infected with the tuberculosis bacteria have a 10% chance the risk of becoming sufferers of tuberculosis. Tuberculosis is common in adolescents and adults of reproductive age. However, all ages may be at risk of becoming sufferers of tuberculosis. People who experience a decrease in immunity, such as HIV, malnutrition, diabetic, and tobacco use are at high risk of tuberculosis patients [3].

Tuberculosis is often called "the great imitator" which is a disease that has many similarities with other diseases are also common symptoms such as weakness and fever. In some patients the symptoms are not clear so neglected even sometimes asymptomatic. Clinical manifestations of tuberculosis sufferers in general are characterized by coughing up blood, fever, diaphoresis (excessive sweating), anorexia (loss of appetite), weakness, and weight loss. Gradually, tuberculosis infection continues to grow in the next few months until the organ. If not promptly treated, tuberculosis can cause death [6].

Rehabilitation Facilities

According to the Indonesian Dictionary [7], rehabilitation is defined as health care facilities which provide the type of services that are preventive, promotive, and rehabilitative. According to Salim [8], rehabilitation is a holistic and integrated program on medical interventions, physical, psychosocial and vocational and to empower a people with disabilities

to achieve their personal, social significance, and effective functional interaction with the world. Based on these definitions, it can be concluded that the rehabilitation is the health care facility to restore a person holistically.

Eudaimonic

Eudaimonic is one kind of welfare that is consistent. Welfare eudaimonic effect is performed through the mechanism of the search for meaning of life, the behavior of individuals and how individuals adapt to the environment (for example, experience a positive effect on adjustment and life goals), while the well-being of hedonic itself focuses on pleasure, satisfaction, and pleasure [5]. Eudaimonic approach focuses on the welfare of the one's function meets the development potential. This approach is usually done by maximizing happiness [9].

General Condition of Tuberculosis Rehabilitation Facility

It is generally known that the process of rehabilitation of tuberculosis is divided into two phases, namely intensive phase (2-3 months) and the continuation phase (4-6 months) with treatment regimen consists of main and auxiliary regimen. The Anti Tuberculosis Medication is the first step as a recovery therapy. The most frequent treatment for the tuberculosis patients is carried out in 6 months. In addition, the medication package consists of the intensive stage and advanced stage. The intensive phase consists of RHZ (Rifampicin (R), isoniazid (H), Pyrazinamide (Z)), while the second phase consists of RH (Rifampicin (R) and Isoniasid (H)) [2].

In addition to medication treatment, a need for additional treatment (supportive or symptomatic) to increase endurance and overcome symptoms/complaints is commonly carried out. In this case, the outpatient should be given nutritious food, vitamin supplements, febrifuge, medicine cough, shortness of breath, and other additional treatment. In hospitalized patients who have experienced complications such as coughing up blood, poor general condition, pneumothorax, empyema, pleural effusion, pulmonary tuberculosis meningitis miller even tuberculosis, patients should be given supportive or symptomatic treatment in accordance to the clinical circumstances and patient situations [2].

Six months after the medication treatment, both clinical evaluation and investigation are required. Clinical Evaluation in Patients with tuberculosis is the best parameter to assess the success of the treatment. Evaluation includes evaluation of clinical, bacteriological, radiological, drug side effects, and the evaluation of the regularity of treatment. In the case the actual clinical improvement except for the radiological picture showed insignificant changes, the OAT will remain to be suspended [2].

Tuberculosis Rehabilitation Approach Through Eudaimonic

Several researches have figured out the positive effect of eudaimonic approach in the rehabilitation and medicinal process for the patients. A research group established by Carol Ryff had found interesting result in the sample of the elderly women with higher levels of life purpose, expressive feelings of personal growth, and better interpersonal relationships showed an indication of lower cardiovascular risk, better endocrine regulation, and lower cortisol levels in the saliva through the day [10].

One obvious example on the implementation of eudaimonic approach is the optimism of the patient. Optimism affects on the physical health through several mechanisms, namely: (1)

optimism and positive expectations are the elements that can protect the health of a challenging situation for the balance of life. For instance, the body of optimistic person produces higher immune responses compared to pessimist person's body system. Immune responses naturally function as a cell killer of hazardous substances, (2) there is a trend of optimism that can affect person's health through the realization of healthy behaviors in general and on the individual in particular. Ideally, this behavior can prevent chronic stress and physical illness as well as psychological complications. Research carried out by Schier in patients who undergo treatments for serious illness indicated that patients who are optimistic and actively involved during the rehabilitation process also have higher white blood cells in the body that produce higher immunological system in comparable with the pessimistic patients.

The effect of eudaimonic approach in the rehabilitation and medical treatment of patient sketching is illustrated in the following chart flow.

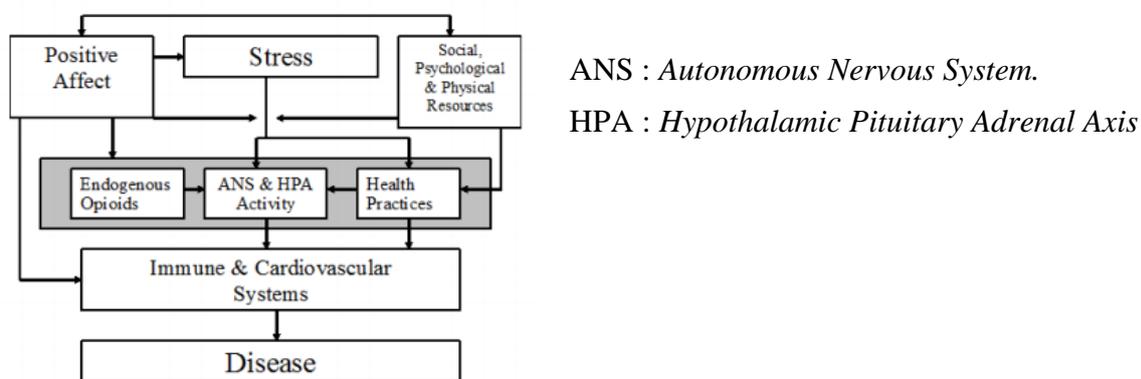


Fig. 1. Indirect influences of positive effect on the health model.

The process can be applied in the rehabilitation of tuberculosis patients. The result of eudaimonic approach can be positive feelings which may adversely affect the stress that occurs in patients with tuberculosis. The relationship between stress and ANS-HPA is relationships contradictory. Thus, when the stress decreases then the ANS and HPA as the supporting factor in the body's immune system of patients with tuberculosis will increase. It can affect people with immune system diseases and cardiovascular disorders, while tuberculosis is a disease that attacks the immune system disorder.

The World Health Organization declared that the key to the success of tuberculosis control programs is to implement the DOTS strategy, which has also been adopted in Indonesia. The understanding over DOTS is very important in order to overcome the issue of TB appropriately. In addition, DOTS contains five components, namely:

1. The government's commitment to carry out the national TB program.
2. The investigation of the cases of TB with smear microscopy examination.
3. A guarantee of the direct observation of short-term medications, known as the DOT (Directly Observed Therapy).
4. The procurement of OAT in ongoing basis (sustainability).
5. The monitoring, recording, and reporting. The term is defined as the DOT direct supervision by using daily short-term medications with the Supervisory Swallowing Drugs (PMO).

Basically, it is expected that in the rehabilitation process of patients with TB, the psychological assistance treatment with eudaimonic approach is required as a part of the DOTS strategy. Several programs that can be carried out, such as:

- a. Individual and group counseling, excavation psychological problems including low self-esteem experienced by each patient of tuberculosis.
- b. Self help group, such as group discussions conducted by both the health team and a former patient of tuberculosis. The group can share the experiences, encouragement, and support of the members.
- c. Other interventions can also be used but focuses on a group of tuberculosis patients to improve their self-esteem. Hence, the patients will be more optimistic during the rehabilitation process can have an interaction with normal people and be confident after the rehabilitation process.

“CAFÉKU” A FACILITY OF TUBERCULOSIS REHABILITATION WITH AN EUDAIMONIC APPROACH

“Cafeku” is a follow-up of the Endemic Care for Tuberculosis. It is a rehabilitation facility for the patients with tuberculosis by implementing an eudaimonic approach. The visions and missions of the facility are as follows:

A. Vision:

Realizing the comprehensive and holistic tuberculosis rehabilitation environment by using eudaimonic approach in traditional method.

B. Missions:

1. To create an environment that increases the immune responses and the improvement of healthy behaviors in patients with tuberculosis.
2. To organize the rehabilitation with conducive eudaimonic approach.
3. To establish the patient’s confidence after recovering from tuberculosis.

C. Objective:

Realizing the comprehensive and holistic tuberculosis rehabilitation environment by using eudaimonic approach in traditional method.

D. Goal:

1. Tuberculosis patients.
2. People with high risk of tuberculosis.

Cafeku have a program to supporting the rehabilitation process of tuberculosis. Cafeku program and facilities include the following:

1. Individual counseling, to explore the problems of patients, individually. Settings room cubicle as space setting that provides privacy area [11]. Had the intent to create privacy, encourages communication and creates a vertical area in the document storage [12]. So that tuberculosis patients can feel comfortable consulting and diagnosis with a counselor or doctor, then the entire data stored on tuberculosis patients. Facilities in this room, include chairs counselor, counseling chair, props, shelf document and room temperature control.

2. Counseling group, in the form of a discussion that includes 20 people to share experience and conduct joint motivation to improve optimism and positive expectations. So people can give each other positive optimism and hope as an element that can protect the health of a challenging situation for the balance of life. Existing facilities in this space include folding chairs and room temperature control that provides comfort in patients with tuberculosis for discussion. Then bookshelf that holds reference books to increase knowledge about tuberculosis and set a mind at rest themselves by reading.
3. Group intervention (self help group), it can be held a motivation seminar or counseling. the intervention group had greater space than counseling rooms, can accommodate 100 people. Thus allowing groups of patients do all intervention activities more freely despite being in the room. Facilities in this room include sound, chairs, media visualization and room temperature control.
4. Recreational area (Art and sport), as a means of recreation and development interests tuberculosis patients in improving health through the realization of healthy behaviors in general and specifically on the individual himself. This area is an open green space that can include recreational activity such as, gymnastics, sports, painting, and art counseling.
5. Parks of Intervention, this park is used for the implementation of intervention programs with different conditions, which have the impression of an open and natural. Interventions in the park can improve immunocompetence better response. This park has space to sit together in intervention, either in groups or individually. It also gives the impression of comfort for tuberculosis patient can enjoy the beauty of nature.

The visualization design for Cafeku the facility rehabilitation of patients with tuberculosis:

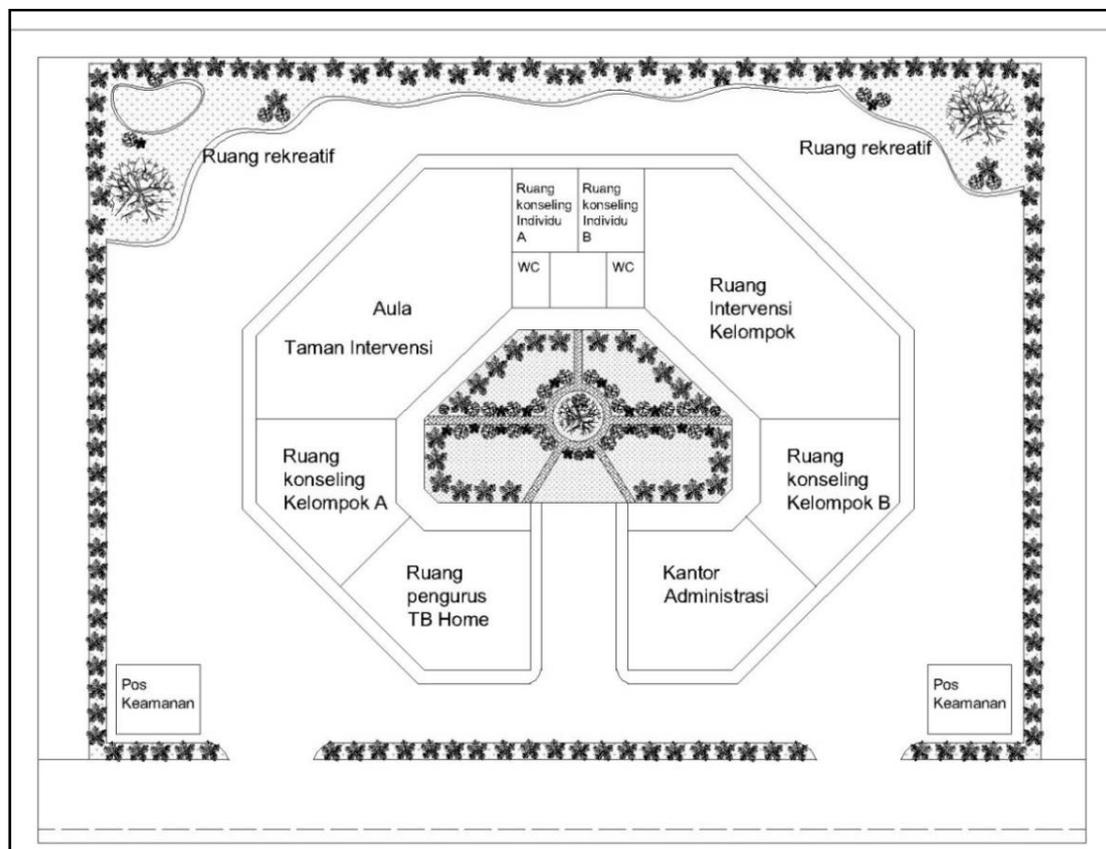


Fig.2. Visualization Design of Cafeku

Archival documents required in the management of this unit are:

1. Nursing care, with the function:
 - a. Helping people to be independent.
 - b. Invites individuals or communities to participate in the health field.
 - c. Help individuals develop the potential for maintaining optimal health in order not to depend on others to maintain their health.
 - d. Helping individuals obtain optimal health status.
2. Nutritional care, with the function:
 - a. Provisioning, management and distribution of food for people, both regular and diet food.
 - b. Help meet the nutritional needs and nutrition during treatment.
 - c. Being media nutrition consultation, both outpatient and inpatient patients.
3. Leaflets and posters serves as a medium of information to the public relating to the rehabilitation of tuberculosis that can provide additional knowledge regarding tuberculosis and made reference to increasing the motivation for patients to recovery.

In order to implement Cafeku Tuberculosis is a means of rehabilitation for tuberculosis through eudaimonic approach to the fulfillment of the rehabilitation facility is the need for follow-up and implementation of the rehabilitation facility by medical personnel-related, include:

1. Physician specialist in, for health workers who perform medical diagnosis and treatment of disease. Doctors are expected to always intervene in people with tuberculosis to increase optimism and positive expectations.
2. Nurses, need to hold training for nurses for treatment with eudaimonic approach, in treating tuberculosis patients as having an intense meeting time in the healing process of patients with tuberculosis.
3. Nutritionists, which play a role in meeting the nutritional status and nutrient needed for tuberculosis patient, in order to get the nutrients that support the process of rehabilitation.
4. Psychologists, in the implementation of rehabilitation through eudaimonic approach that affects patients to improve health through the realization of healthy behaviors in general and specifically on the individual himself. Then the clinical evaluation in patients with tuberculosis is the best parameter to assess the success of treatment.
5. Pharmacists, a counselor is important in providing and helping people with tuberculosis in the supply of drugs.

The strategic steps Cafeku application is as follows:

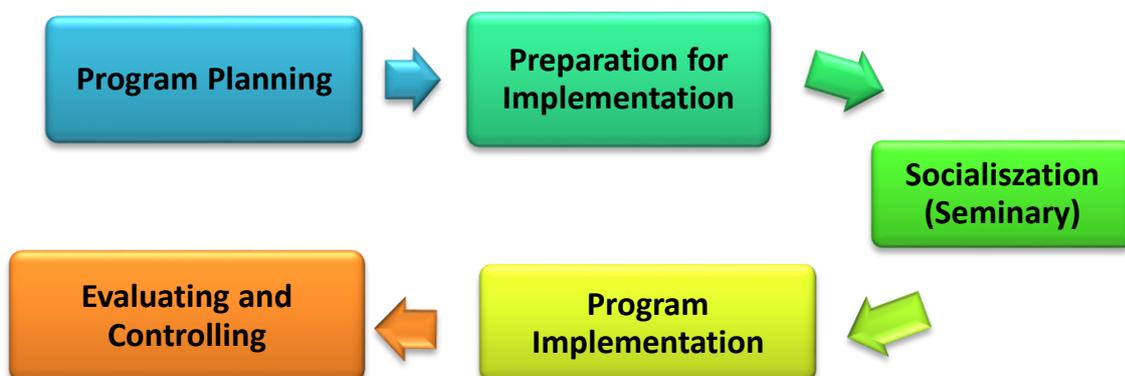


Fig. 3 Implementation Step of Cafeku

1. Planning Program, including program planning Cafeku Tuberculosis through eudaimonic approach, manufacture of building design and program analysis, using 5M (Man, Material, Method, Machine, and Money).
2. Preparation Implementation, after preparation in the implementation planning process that includes facilities, medical personnel, documents, and dissemination.
3. Socialization, which is done by organizing seminar will be followed by the lay public (not only doctors, therapists and nurses only).
4. Program Implementation, includes several programs for tuberculosis patients from counseling, self help group, intervention, and so on.
5. Evaluating and Controlling, this is done to constantly improve performance in the implementation of the program. So as to achieve the vision and mission planned. cafeku will integrate with the local Lung Hospital as a special unit.

CONCLUSION

Cafeku stand for Care for Tuberculosis Endemic. Cafeku Tuberculosis is the rehabilitation of people with TB through eudaimonic approach. Results eudaimonic approaches used can be positive feelings, which may adversely affect the stress that occurs in patients with tuberculosis. Stress and ANS-HPA inversely relationships. So when stress decreased then increased ANS and HPA is a supporting factor in the body's immune system patients with tuberculosis. It can affect people with immune system diseases and cardiovascular disorders, while tuberculosis is a disease that attacks the immune system disorder.

In Cafeku Tuberculosis have programs and facilities to supporting the rehabilitation process. The programs that exist among them ranging from individual counseling to group individual-group intervention. Cafeku tuberculosis which is a means of rehabilitation of tuberculosis that is specially designed with a variety of rooms according to the needs, the existing space of which is space individual-group counseling, intervention spaces, recreational arenas and parks intervention. Thus, the rehabilitation can improve immunocompetence the patient's body that can assist in the process of rehabilitation and raises awareness of healthy behavior so that patients do not transmit the disease to their environment.

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