

BEHAVIOR AND HOME CONDITION OF TUBERCULOSIS PATIENTS IN KINTAMANI DISTRICT OF BANGLI REGENCY (Case Study in the Area of Kintamani District 2017)

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Abstract: Tuberculosis is still one of the biggest public health problems, either in 1/3 population was infection by mycobacterium tuberculosis, every one second to be one people infection, every one year be 9 million new cases and 3 million death results of lung tuberculosis. Lung tuberculosis prevalence in Bali is 0,11% at the population, and than in Bangli Regency with 223800 populations, it is assumed that there would be 72 new cases of tuberculosis in a year. New cases occurrences of lung tuberculosis patient in Kintamani distric are not as much as predicted, yet the number keeps increasing each year. The increasing number of lung tuberculosis patient in Bangli is very much related to behavior and environment condition housing. The goal of this research is to know the behavior and home condition of tuberculosis patients in Kintamani distric of Bangli Regency. This research is quantitative descriptive research with cross-sectional scheme. The sample of this research are 80 tuberculosis suspects who went to Primary Health Center in area of Kintamani District during 2017. From the observation done, there are 38 positively infected by this tuberculosis and 42 others are negative. Data collection had been done using questionnaire and analyzed by using Chi Square test. The result shows that there 7 variables with significant correlation with the contagious potential of this disease, i.e: knowledge ($p = 0,000$), attitude ($p = 0,000$), practice ($p = 0,000$), lighting ($p = 0,000$), humidity ($p = 0,001$), ventilation ($p = 0,002$). It is suggested the Bangli Health Service improve the prevention program through various kinds of ways such a health promotion, more comprehensive inter-sectoral cooperation about healthy housing, partnership development and community empowerment, until can preventing the spread of lung tuberculosis and don't be healthy community problems.

Keywords: Tuberculosis, Behavior, Home Condition.

1. PRELIMINARY

Tuberculosis remains a public health problem that poses a global and national threat. WHO projects one third of world's population has been infected by the *mycobacterium tuberculosis*, as one person is infected for each second, 9 millions new incidents every year and as much as 3 millions mortality worldwide. Indonesia is regarded as the third biggest nation that contributing to the total amounts of tuberculosis patient in the world after India and China (Depkes. RI, 2013).

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Observation over the behavior of TUBERCULOSIS patients in Kintamani Regency suggested that every discharging behavior towards the medication is positively correlated with the resisting state of the tuberculosis bacteria. Supervision along the ongoing medication process has shown that the medication could not be delivered well by either the patient and the family of the patient. The patient believe that the medication could not give any significant effect as the healing effort to sickness in a relatively short period. Beside behavioral factor, environment mostly the house condition also determines the widespread of tuberculosis to a healthy member of the family. A scattered tuberculosis bacteria in the air exerted by a sneezing patient may survive in a prolonged time if the humidity is high and the light is lacking. The wide spreading also will become higher into a healthy host as the house remains high in humidity, lack of light and highly populated.

Another factor obstructing the medicinal therapy of tuberculosis is the attitude of Kintamani's citizen that belief tuberculosis is just another type of cough that is easy to heal as other regular cough with some regular medicine they can buy in the nearest pharmacy any day. Meanwhile, most of tuberculosis patient is found in a terminal state, having a bloody coughing as the bacteria have already reached the lung of the patient.

In any house environment that lack of light, too moist and highly populated, the field observation suggests that any tuberculosis bacterium may survived for up until three months long.

Regarding those background mentioned previously, the writers are interested in running a research about the medication of tuberculosis regarding the factors of patient behavior and the housing condition of the patient in Kintamani Regency.

2. THEORITICAL FRAMING

A. Tuberculosis Disease:

Tuberculosis is a chronic and acute disease that caused by bacteria which infects patient's lung and may also sometimes infecting the kidney, bones, spleen and the brain. The specific bacteria causing tuberculosis is *Mycobacterium tuberculosis*, a rod-shaped bacterium. The symptoms of tuberculosis is a long term coughing, chest pain, asthma, a decreasing appetite, fever, weakened state along with a declining body weight. The source of the infection is a patient with positive acid-resistance Tuberculosis bacteria. The bacteria spreads on the air from one person to another in the form of droplet. droplet (Depkes. RI, 2008)

Most of tuberculosis bacteria infects the lung, but it may also infect another body organs. The name acid resistance bacteria came from its characteristic that confirmed by the coloring test. It may survive in a few hours in a dark and moist place but can not survive in area with an adequate direct sun ray. This is why any family stay in a dark and moist house is suggested to regularly opening the window, allowing enough sun shine to get in the room, as also to dry the bed/mattress once a week. A simple yet effective way in order to prevent the growth of tuberculosis bacteria. Meanwhile, tuberculosis bacteria may remain dormant in any body tissue for a couple of years. Sementara dalam jaringan tubuh kuman ini dapat bersifat *dormant* atau tertidur lama selama beberapa tahun (Amin, Alsaggaf, Saleh, dan Taib, 2003).

B. Behavioral Domain:

Man's behavior is divided into three domains consisting (Notoatmojo, 2007) : a) *cognitive*, b) *affective*, c) (*psychomotor*). In its advance, this Bloom's theory is being modified in the term of measuring the effect of health education :

1. Knowledge:

Knowledge is resulted by knowing, and it happens after someone describe an object using the senses. There are sight sense, hearing sense, smelling sense, feeling and touching sense. Most of man's knowledge are earned by the eye and the ear. The following indicators may be used to define the level of knowledge or awareness towards health :

- a) Knowledge about sickness and disease, consist of :
- The cause of the disease
 - The symptoms and signs of the disease
 - The medication of the disease and where to obtain it.

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b) Knowledge about health promotion and healthy living, consist of :

- Nutritional food and proper diet
- The health benefit of nutritional food
- The benefits of body workouts for health
- Type of diseases, the danger of smoking, the disadvantage of drinking alcoholic drinks, the danger of drug abusing, and so on.
- The importance of quality rest period, relaxation, recreation and stuff for health and so on.

c) Knowledge about environmental health

- The benefits of proper house sunlightning and the lightings.
- The benefit of house ventilations
- The benefits of house sanitation
- The proper way to spit the saliva

2. Attitude:

Attitude is a form of reaction or a closed response of someone towards any stimulant or object. An attitude is unlikely to be seen directly, it can only be interpreted from a closed behavior.

3. Practice:

Not every attitude may be expressed in a behavior. (*overt behavior*). To express an attitude into a real act, supporting factor(s) or predisposing condition as facility and other's support are needed.

3. THE HOUSE PHYSICAL ENVIRONMENT

Definition of House:

House is one of man's basic need and an important factor when it comes to pride and dignity, hence the conditions to support the building of a housing for the whole community in a sustainable state are needed. (Soedjajadi Keman, 2004).

A healthy house condition :

The physical condition of a healthy house are :

a. Materials

1). Floor

Floortile or cements are good yet dont fit for any villagers' financial condition. A wooden floor is most highly used in a well living family house in a village, which cost a lot. Therefore the solidified soil is enough for the floor in the village house.

b. Ventilation

There are many functions of house vents. The first one is to keep the air flow remain fresh daily. This preserves the balanced amounts of O₂ needed by the house member. The lacking of house ventilation thus impact the lacking of Oxygen may create a higher state of CO₂ that has a poisonous effect for the family in the house.

c. Lightings

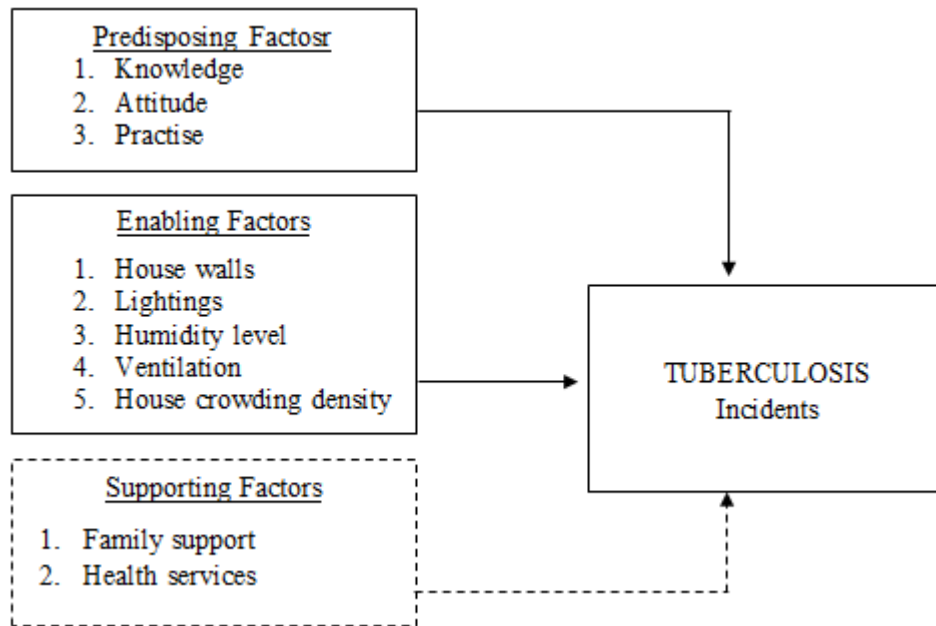
A healthy house demands an adequate lighting, not too much, not lacking. Beside it's discomfort situation, a house that lacking of light mainly sunlight may be a beter media of breeding for many diseases.

d. House area

a proper house area must cover the amount of the family living in it. An overcrowded house may extent into discomfort and further increases the chance of man to man infections.

Logical Framework:

Taking account of the backgrounds and literature studies, the researchers than build the research logical framework as follow:



4. RESEARCH METHODE

Population and Sample:

1. Population

The population of this research are every tuberculosis patients that seek for medication in every primary health care provider in Kintamani regency along 2017. The amount of the suspected patient is 160 suspects.

2. Sample

The amount of the sample taken in this research is 80 samples or 50% from the population. From those amounts, it is obtained as much as 38 patients of tb and the rest 42 are negative tb.

Data Analysis:

1. Data tabulation (crosstab):

Cross tabulation presenting the data in the form of tabulation of row and column calculated with ChiSquare analysis. The way to read and create the cross table is :

- a. Defining independent and dependent variables.
- b. grouping each variable into categories and attribute.
- c. Creating cross table
- d. Defining frequencies for each cell and calculating percentage in the vertical direction
- e. Comparison is done between each column (to the side) for each categories.

2. Chi Square Test

3. Validity test

4. Data reabiliti test

5. Hipotesis test

5. RESULT AND EXPLANATION

a. Behavior analysis and TB Patient's house condition analysis in Kintamani Regency

Variables showing a significant correlation with TB incident in Bangli Region are shown in tabel 5.1 :

Tabel 5.1: Chi Square Result based on Variables

No	Variabel	P	X ²	RR
1	Knowledge	0,001	12,704	2,395
2	Attitude	0,000	17,911	2,853
3	Practise	0,000	24,101	3,561
4	Lightings	0,000	17,911	2,853
5	House crowding density	0,000	16,241	2,800
6	Humidity	0,001	12,704	2,395
7	Ventilation	0,002	9,642	2,095

The chi square analysis above conclude that :

The knowledge variable with ρ value = 0,001 means that there is a significant correlation between "knowledge" variable with tuberculosis incident in Kintamani Regency with the relative risk (RR) score = 2,395

Attitude variable with ρ value = 0,000 means that there are a highly significant correlation between "attitude" variable and tuberculosis incident in Kintamani regency with the relative risk (RR) values = 2,853

Practise variable with ρ value = 0,000 means there are a highly significant correlation between "practise" variable and tuberculosis incident in Kintamani regency with the relative risk (RR) values = 3,561

Lighting variable with ρ value = 0,000 means there are a highly significant correlation between "natural lightings" variable and tuberculosis incident in Kintamani regency with the relative risk (RR) values = 2,853

House crowding density variables with ρ values = 0,000 means there are a highly significant correlation between "house crowding density" variable and tuberculosis incident in Kintamani regency with the relative risk (RR) values = 2,800

Humidity variable has the ρ values = 0,001 means there are a highly significant correlation between "humidity" variable and tuberculosis incident in Kintamani regency with the relative risk (RR) values = 2,395

Ventilation variable with ρ values = 0,002 means there are a highly significant correlation between "ventilation" variable and tuberculosis incident in Kintamani regency with the relative risk (RR) values = 2,095

6. CONCLUSION, RECCOMENDATION AND SUGGESTION

A. Conclusion:

Based on the research result it can conclude that:

1. The behavior of TUBERCULOSIS patient is significantly correlated with TB incidents in Kintamani region. It is shown by the value of $\rho < 0,05$ and the RR of "Knowledge" variable = 2,395, RR value of "attitude" variable = 2,853 and RR value of "practise" variable = 3,561.

2. The Tuberculosis patients' house conditions are highly significantly correlated with the tuberculosis incident in Kintamai Regency of Bangli Region. It is confirmed with the value of $\rho < 0,05$ with the lighting variable RR value = 2,853, House crowd density variable RR value = 2,8, humidity variable's RR value = 2,395 and ventilation variable's RR value = 2,095

B. Reccomendation:

1. The Bangli Regional Government must allocate adequate budget for the department of health in order to execute the prevention and intervention program of TUBERCULOSIS so it wont be a public health problem.

2. The community must actively involved in any health promotion program so they wont be infected by the tuberculosis disease.

C. Suggestion:

1. Any effort to promote the public's knowledge, attitude and practise towards the prevention and intervention of tuberculosis disease in a sustaining method by any forms of media necessary as expected by the community (socialisation, audio and video media, local art and culture enhancement by inserting any information about this tuberculosis prevention and intervention)
2. A collaboration between Departement of Health, General Working Departement, Society Empowering Body must be implemented in order to inform the community about how to build a simple yet healthy house, mainly those parts related to tuberculosis diseases prevention such as : air ventilation, proper lightings and so on.
3. A proper and healthy diet containing variety fruits and vegetables as the main source of nutrient essential for improving immune system must be a habit for the community, as the preventive act for any disease including tuberculosis disease.
4. Usage of traditional herbs to improve the immune system mainly when the coughing, bronchitis and tuberculosis is occurring, such as wuluh starfruit, apple, white frangipane and kemerangon leaves.

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