THE EFFECT OF ENVIRONMENTAL SANITATION AND HEALTH SERVICES TO LIFE EXPECTANCY IN WEST NUSA TENGGARA PROVINCE

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ABSTRACT

This research tries to determine the relationship of environmental sanitation and health services to life expectancy in NTB Province. This study uses a qualitative approach using literature studies. This paper is also intended to increase community knowledge and insights on how to manage basic sanitation in order to improve public health. It can also be used as a source of information to provide useful inputs for health agencies in NTB in formulating policies on basic sanitation management issues. A good life expectancy in a country will have a healthy society and a healthy society will make the country have a quality society. This life expectancy becomes the reference number in the development program, especially the health development program. Therefore, it is necessary to equitable development in all regions.

Key words: environmental, sanitation, health services, life expectancy

INTRODUCTION

Life expectancy at an age X is the average life year that is still lived by someone who has managed to reach age X, at a certain year, in a situation of mortality that prevails in the community. Or Life Expectancy Life can also be interpreted by the length of human life in the world. Life Expectancy can be used to see the extent of life in a particular city or country. What's the use of knowing life expectancy? Certainly is planning and evaluation. For the government, this is an indicator of the ability to maintain the health of its people. The higher the better the government's ability in health facilities, nutrition adequacy, and environmental health. While for us is planning and self-evaluation, how long we will live, how long we retire, how much funds are needed during retirement, and others. Long life is a common expectation, long life is determined by several different factors. As discussed this time is about life expectancy, the same as age in general, namely the presence of several factors. Among them are gender, race, medical condition, and family health history, through economic, social and environmental factors. The environment is one of the factors that influences public health status. The optimal degree of public health can be realized if Indonesian people live in a healthy environment and behavior including a healthy home. This is one indicator of Healthy Indonesia 2010 and the Millennium Development Goal (MDGs) target of 2015. Efforts to create a healthy environment through improved environmental sanitation (Environmental Sanitation Water Working Group, 2004).

Environmental sanitation is the supervision of the physical, biological, social and economic environment that affects human health, where the useful environment is improved and multiplied while the harmful ones are repaired or eliminated (Entjang, 2000). In line with global climate change, there has been a massive environmental change which has an impact on the lifestyle of creatures, more and more pathogenic mutations that cause disease. Based on the results of the investigation of Word Health Organitation in Neglected Sanitation (Percik Vol. 4 I / June 2004), several regions in the world have increased cases and the potential for transmission of environmental-based diseases that have resulted in increased morbidity and mortality affecting all age groups. Once the magnitude of the influence of the environment, especially on health, it is necessary to do environmental health efforts and environmental sanitation.

According to Entjang (2000), that environmental sanitation is an element that has an important role. Poor environmental conditions and sanitary hygiene have resulted in the development of mosquito populations, flies and other disease-vector vectors. These developments are found in slums, and unhealthy water sources due to the lack of good environmental management. WHO further reports that unhealthy environmental conditions are found in many regions of developing countries including Indonesia. Likewise, the development of patterns of environmental-based diseases caused by poor environmental sanitation, and direct contact with polluted water sources, uninhabitable housing, and other infectious diseases originating from animals. Based on this, the Government of Indonesia through the Ministry of Health of the Republic of Indonesia took strategic steps to prevent and cope with environmental-based diseases through the management of basic sanitation and the environment. These efforts are implemented through health programs both in the national health system and in the medium and long term plans. Some of the priority programs include (1) provision of healthy drinking water sources, (2) management of industrial waste and household waste, (3) improvement and supervision of healthy homes, (4) eradication of mosquito nests and control of mosquito populations, and prevention of disease sufferers based on the environment and (5) air quality monitoring.

Some environmental sanitation indicators recommended by the Ministry of Health of the Republic of Indonesia include the percentage of healthy homes reaching 80%, sanitation in public places 80%, clean water supply, institutional environmental health services that are fostered by 70%, households that have a family toilet of 90%, the presence of waste water disposal facilities (RI Ministry of Health, 2000). According to Soemirat (2000), environmental health problems such as housing, faeces, clean water supply, garbage disposal, and waste water disposal, affect public health, especially on household environmental health problems. Overall, environmental health conditions in Indonesia are still very poor. Based on the 2006 Indonesia Profile, it is known that the condition of homes that meet healthy requirements at the national level is 43.89%. The condition of waste

disposal facilities that meet the requirements as much as 62.11% and the conditions of latrines that meet the requirements of 46.54%, fresh water supply (drinking water) has only reached 75%, access to healthy latrines (WC) 61.8%, disposal facilities domestic wastewater (SPAL) has only reached 25% and household waste management 18% (Ministry of Health Republic of Indonesia, 2006). The implication of the low quality of the environment is an increase in morbidity and mortality that attacks all age groups, especially infants and toddlers. Based on 2004 National Health data, that the Infant Mortality Rate is 35 per each live birth. The main causes of death are among others by environmental-based diseases such as ARI (22.8%), and diarrhea (13.2%) (Wilopo, 1998). The results of the Household Health Survey (SKRT) (1995), showed that diarrheal infectious diseases and ARI are the diseases that are ranked as the leading cause of death of infants and toddlers. Based on 25 causes of under-five mortality according to the survey, it is caused by socio-economic conditions which are still low, as well as hygiene and sanitation levels of the home environment that are not yet optimal (Ministry of Health of the Republic of Indonesia, 1996).

Based on the Health Profile of the Province of West Nusa Tenggara (NTB), it is known that the problem of healthy housing is still a major problem in health development in NTB. Data of the 10 biggest diseases in NTB, in general the complaints they face are environmental-based diseases such as ARI, Skin Disease Infection, Diarrhea, Abdominal Disorders and others. We can conclude that the top diseases are dominated by environment-based diseases such as ARI, skin disease, diarrhea and stomach disorders. This fact means that the environmental health and basic sanitation conditions of the NTB community are very lacking, there are still many people who defecate in rivers, irrigation and bushes, they even leave wastewater in the backyard of their homes which can cause environmental-based diseases. Basic sanitation is closely related to community behavior. Based on an analysis of the environmental health situation carried out, it was found that poor management of basic sanitation. Allegedly this is caused by several factors including: knowledge, attitudes, and community actions.

Based on the background of the above problems, the formulation of the problem to be elaborated is: to what extent is the relationship of environmental sanitation and health services to life expectancy in NTB Province?

METHODOLOGY

This study uses a qualitative approach using literature studies. Life Expectancy at an age x is the average life year that someone who has managed to reach age x will still be living in, in a given year, in the prevailing mortality situation in the community. Life expectancy is a tool to evaluate government performance in improving the welfare of the population in general, and improving health status in particular. Low life expectancy in an area must be followed by health development programs, and other social programs including environmental health, nutritional adequacy and calories including poverty eradication programs. Life expectancy (AHH), used as an indicator in measuring the health of an individual in an area. AHH is the estimated average number of years a person can take for life. AHH is defined as the age that might be achieved by someone who was born at a certain time. AHH is calculated using the indirect approach (indirect estimation). There are two types of data used in AHH calculations, namely children born alive (ALH) and children still alive (AMH). Meanwhile, to calculate the life expectancy index, the maximum life expectancy value according to UNDP is used, where the highest number as the upper limit for index calculation is used 85 years and the lowest is 25 years (UNDP standard). Life expectancy can be long if the health status, nutrition and the environment is good.

RESULT AND DISCUSSION

1. Development of Life Expectancy in West Nusa Tenggara for years 2009-2018

Life Expectancy is a tool for evaluating the performance of governments in improving the welfare of the population in general, and improving health status in particular. Low life expectancy in an area must be followed by health development programs, and other social programs including environmental health, nutritional adequacy and poverty eradication programs. Poverty will reduce the purchasing power of the community, conversely in communities that are above the poverty line, purchasing power tends to be higher so that it will increase the ability of the community to meet nutritional needs; able to have a better education so that they can get a job with adequate income, which in turn will improve the degree of public health and extend life expectancy.

Life expectancy data released annually by BPS are obtained through surveys. Life expectancy is greatly influenced by cases or infant mortality rates. When looking at the trend of infant mortality rates that tend to decline, it is estimated that AHH NTB will increase. The estimated Life Expectancy for the NTB Province in 1996 is 58.9 years, meaning that babies born before 1996 (period 1992-1994) will be able to live to 58 or 59 years. The increase in the average life expectancy of the people of West Nusa Tenggara Province, from 60.9 years in 2006 to 61.2 years in 2007 and 61.5 years in 2008, increased to around 61.8 years in 2009. Figures this is still below the National figure of 70.7 in 2008.

Babies born before 2006 have a longer life expectancy of 60.90 years, and babies born in 2012 have a life expectancy of 62.73 years. Increased AHH in NTB Province until 2012, but AHH NTB Province is still below the national AHH. The increase in AHH shows an increase in the life and welfare of the people of NTB Province. Babies born before 2013 are estimated to have a life expectancy of 64.7 years, and have increased in 2014 to 64.9 years or an increase of 0.2 years and again increased in 2015 to 65.38 years or an increase of 0.48 years. Then in 2016 the Life Expectancy Rate increased to 65.48 years and in 2017 the NTB Province Life Expectancy increased by 0.07 years meaning it did not even reach 1 month of the increase to 65.55 years.

2. Condition of Environmental Sanitation in West Nusa Tenggara 2009-2018

The degree of health is greatly influenced by environmental factors in addition to behavioral factors and health services. Environmental sanitation efforts are carried out to realize healthier environmental quality, among others through community empowerment in the provision of clean water and sanitation, facilities for maintaining and monitoring environmental quality, controlling the impact of environmental pollution risk and developing healthy areas.

1) Healthy House

A healthy house is a residential building that meets health requirements, namely having a healthy latrine, landfills, clean water facilities, waste water disposal facilities, good ventilation, suitable residential density and the floor of the house is not from the ground. In 2016 there were 442,646 houses that did not meet the requirements, henceforth homes that did not meet the requirements would be built in 2017. However, construction could not be carried out on all houses that did not meet the requirements. Coaching was carried out at 128,505 houses only (29.03%). The results of the coaching found that as many as 43.71% or 56,173 houses that were fostered met the requirements. So that until 2017 there will be 919,527 healthy homes or 70.07% of all existing homes. Most healthy homes are in West Sumbawa Regency and Bima City.

2) Access to Family Drinking Water Sources

Proper drinking water that can be accessed by the community is still very minimal. The problem of poverty as one of the causes of the low ability of residents to access adequate drinking water. In addition, the low level of public awareness about the environment, the low quality of septic tank buildings and the poor sewage system also affect the availability of drinking water sources. In 2017 the population in NTB Province had 75.22% sustainable access to safe drinking water. The population's access to such drinking water is obtained through the means of protected dug that meets the requirements of 48.50% and eligible pipelines (PDAM, BPSPAM) as much as 34.97% and the rest is obtained through non-piping networks that meet the requirements such as galley wells with pumps, pump wells, terminal water, protected spring water and rainwater collection.

3) Drinking Water Quality

In accordance with Decree of the Minister of Health No. 907 / Menkes / SK / VII of 2002, the Minister of Health conducts technical guidance for all activities related to the implementation of drinking water quality requirements. In implementing the supervision of drinking water quality, the District / City Health Office can determine water quality parameters to be examined in accordance with the needs and conditions of the catchment area, water treatment plant and pipeline network. In 2017, out of 10 districts / cities in NTB Province, all report the results of drinking water quality checks at drinking water providers. The drinking water samples examined were 733 samples. Of the drinking water samples 585 samples or 79.81% were eligible (physical, bacteriological and chemical).

4) Access to Healthy Latrines

Access to sanitation, especially in the use of healthy latrines, is currently still a serious problem in NTB Province. The high rate of defecation in any place (open defecation), is one indicator of the low access. The population that has access to proper sanitation (Healthy Latrines) in 2017 was 75.06%, meaning that as many as 24.94% of the population did not have proper access. Of the 75.06% of the population who have access to proper sanitation, the type of toilet facilities used is 10.07% using communal latrines fulfilling requirements, goose neck latrines meeting 87.13% requirements, plengsengan latrines meeting 1.96% requirements and latrines cemplung meets the requirement of 0.84%.

5) Villages that Implement Community-Based Total Sanitation

The Community-Based Total Sanitation Program (STBM) aims to make the community aware of the importance of clean culture, changing people's behavior by emphasizing community empowerment. The STBM program has been started since 2006. Then in 2008 a Minister of Health Decree was issued on the National Community-Based Total Sanitation Strategy. The five pillars in the STBM that are the aim of implementing the program in rural areas are not defecating carelessly, washing hands using soap, managing drinking water and food in the household, managing household wastewater safely and managing waste. The village / kelurahan achievement in implementing STBM in 2017 was 1,056 villages out of 1,137 existing villages / kelurahan (92.88%). Coverage of BABS Stop villages (SBS) is 511 villages / kelurahan or 44.94% and STBM villages / kelurahan are 11 villages / kelurahan or 0.97%.

6) Public Places Are Qualified

Public places (TTU) have the potential to be places of disease transmission, environmental pollution or other health problems. Supervision or sanitation inspection of TTU is carried out to create a clean TTU environment to protect public health from possible transmission of diseases and other health problems. Sanitation TTU must meet health requirements in the sense of protecting, maintaining, and improving the degree of public health. Public service facilities or facilities that are required to carry out environmental sanitation include, public places or publicly managed public facilities, places that facilitate disease transmission, or places general services where the intensity of the number and time of visits is high. Such TTU covers educational facilities / schools, health facilities and hotels. The results of 2017 sanitation inspections in districts / cities show that TTU that meets health requirements in NTB Province is 76.03%. Means that as much as 23.97% TTU does not meet health requirements. This condition is worrying considering that in TTU facilities many people gather. Health facilities consisting of health centers and hospitals, do not all meet health requirements. Only 93.68% of the health centers met the health requirements and 97.14% of the hospitals meeting the health requirements.

7) Food management place meets requirements

With the increasing needs of the community for food provided outside the home, food products provided by companies or individuals engaged in the business of providing food for public use, must be guaranteed their health and safety. This can only be realized if it is supported by good hygiene and sanitation conditions in a Food Management Plant (TPM) and is maintained jointly by employers and the community. The TPM in question covers catering or catering services, restaurants and restaurants, drinking water depots (DAM), the food industry, canteens, food stalls and snacks and so on. As one type of public service place that processes and provides food for many people, the TPM has a large enough potential to cause health problems or illness and even poisoning due to the food it produces. Thus the quality of food produced, served and sold by TPM must meet health requirements. The results of sanitation inspection in 2017 in the district / city showed that TPM that met the sanitation hygiene requirements was 48.35% and 36.40% were not fulfilling the requirements.

3. Development of Health Services in West Nusa Tenggara 2009-2018

The efforts of maternal and child health services aim to improve the health of pregnant women and the fetus in the womb until birth, the postpartum period and the growth period of infants and children, among others through improving antenatal services according to standards for all pregnant women in all health facilities and increasing childbirth assistance by competent health workers who are directed to health facilities. Antenatal services are health services by health professionals. Antenatal care for pregnant women is carried out according to the standards of midwifery services. The goal of health development in the province of West Nusa Tenggara is to realize the vision and mission of the established health development. To achieve the goals of health development is implemented through health development programs that are pursued in the main points of the program. The efforts of maternal and child health services aim to improve the health of pregnant women and the fetus in the womb until birth, the postpartum period and the growth period of infants and children, among others through the improvement of antenatal services according to standards for all pregnant women in all health facilities and the improvement of delivery assistance by competent health workers who are directed to health facilities.

a) Pre-Delivery Services (Ante Natal Care / ANC)

Antenatal services are health services by health professionals. Antenatal care for pregnant women is carried out according to the standards of midwifery services. To see access and quality of health services to pregnant women can be described through the coverage of K1 and K4. K4 Coverage for 2013 to 2017 all of them are still below the target set, for 2017 the target set for K4 coverage is 98%. K1 coverage in 2017 in all districts / cities has reached the target (100%) except in Kab. Sumbawa. Whereas the K4 coverage in 2017 in NTB Province that has reached the target (98%) is only in the East Lombok Regency (98.12%). Pregnant women receive the Tetanus Toxoid (TT) immunization service at visits K1 to K4. The standard of TT immunization is 5 times a lifetime. One of the pain in pregnant women is anemia which can cause maternal death due to bleeding during labor. Anemia due to iron deficiency as a major cause of anemia in pregnant women compared to other nutritional deficiencies. Therefore nutritional anemia during pregnancy is often identified with iron nutritional anemia. Pregnant women when ANC given Fe 90 tablets for the prevention and treatment of iron nutrient anemia. In 2017 in NTB Province, the coverage of Fe-1 tablets was 103.24% and Fe-3 tablets was 93.91% so it can be interpreted that not all pregnant women get 90 tablets. ANC also detects the risk of pregnancy complications including abortion, hyperemesis gravidarum, vaginal bleeding, hypertension in pregnancy, pregnancy over time and premature rupture of membranes. Resti pregnant women or with complications handled in NTB Province in 2017 were 27,411 people or 119.33% of the estimated pregnant women with obstetric complications. Coverage Resti pregnant women or with complications that are treated in excess of 100% due to the estimated number of pregnant women with fewer complications compared to pregnant women who actually found and treated.

b) Childbirth by Health Workers (Linakes)

Coverage of births by health workers in 2017 was 94.09%, meaning that around 5.91% of deliveries were assisted by non-health workers (such as TBAs). This coverage increased compared to the coverage in 2016 which was 91.83%. Most complications and deaths of mothers and newborns occur during labor. This can be caused by childbirth assistance that is not performed by professional health workers (having midwifery competencies). In 2017, if the coverage of K4 services is compared to the coverage of delivery assistance by health workers, then the coverage of deliveries assisted by health workers is 0.21% lower than the coverage of K4 services of pregnant women, it can be interpreted that around 227 pregnant women who have received K4 services, at the time of delivery was not helped by health workers. This figure is lower compared to 2016, where there were 4.77% of pregnant women who had received K4 services but were not helped by health workers during delivery. For the following years, it is hoped that supervision can continue to be carried out for pregnant women who have received K4 services so that they can be handled by health workers when they enter labor.

c) Postpartum Services

Improved maternal health after delivery, among others, through improved health services for postpartum mothers given at least three times from six hours to 42 days postpartum by health workers to detect early complications that may occur in puerperal women and giving vitamin A capsules of 200,000 IU. In 2017, there were districts / cities where postpartum mothers received vitamin A lower than postpartum mothers who received health services, namely West Lombok and North Lombok districts, while for coverage in the city of Mataram, the data was not reported. This must be observed, because the provision of vitamin A to postpartum mothers is one indicator in health care for postpartum mothers, so it can be interpreted that there are postpartum mothers who get health services that are not according to standards because they do not get vitamin A.

4. Policies on Environmental Sanitation Management and Improvement of Local Government Health Services in Increasing Life Expectancy in West Nusa Tenggara

Clean and Healthy Life Behavior (PHBS) is behavior related to the efforts or activities of a person who maintains and improves his health. Thus the community can recognize and overcome their own problems, especially in their respective settings and the community can implement healthy ways of life by maintaining, maintaining and improving their health. The household is the smallest unit in the environment, so that clean and healthy living behavior should be implemented and instilled in all family members. In the end a healthy family will form a healthy society as well.

PHBS in the household is an effort to empower household members to know, want and be able to carry out clean and healthy life behaviors and play an active role in the health movement in the community. PHBS in the Household is carried out to reach a Healthy Household. Healthy household means being able to maintain, improve, and protect the health of every household member from the threat of disease threats and an environment that is less conducive to healthy living.The results of household monitoring in 2017, from 84,340 households monitored (6.3% of the total number of households) as many as 35,322 (41.88%) households behave in a clean and healthy life. In 2016, of 42,324 households monitored (3.2% of the total number of households) as many as 14,198 (33.55%) of households behaved in a clean and healthy life. Households monitored in 2017 increased slightly compared to households monitored in 2016. Achievement of PHBS households in NTB Province is still very low so efforts should be made to improve these achievements. The effort that can be done is to provide counseling about the importance of PHBS to the general public, school children, mothers of toddlers, etc., to monitor PHBS routinely and thoroughly for all households. In addition, it is also necessary to embrace cadres, community leaders and policy makers to participate in moving the community to behave in a clean and healthy life.

CLOSING

1. Conclusions

Environmental Health according to WHO (World Health Organization) is an ecological balance that must exist between humans and the environment in order to guarantee the healthy state of humans. The scope of environmental health includes the provision of clean water / drinking water, processing and disposal of liquid, gas and solid waste, prevention of noise, prevention of water borne diseases, air, food, and vectors, environmental quality management of water, air, food, settlement and hazardous materials.

Life Expectancy Rate is the length of human life in the world. Life expectancy at an age x is the average life year that someone who has managed to reach the age of x is still living, in a given year, in the prevailing mortality situation in his community. This environmental pollution has an impact on environmental health which ultimately affects public health, which in turn will determine the success of the development program because it is an indicator of life expectancy, and to see this life expectancy can be seen from the human development index in a country where one of the indices is an index because health affects the life expectancy. This life expectancy illustrates the health status of a particular country. This life expectancy reflects the welfare and prosperity of a country, if the life expectancy is high, it means that the level of welfare and prosperity of the country is high too, and vice versa if the life expectancy of a country is low, the level of welfare and prosperity of the country is also low. A good life expectancy in a country will have a healthy society and a healthy society will make the country have a quality society. This life expectancy becomes the reference number in the development program, especially the health development program. Therefore, it is necessary to have equitable development in all regions.

2. Suggestion

For the Government or Related Institutions to carry out development evenly in all regions without any imbalance in human resources or funding. Furthermore, it is necessary to improve the management or management of environmental health that is more planned so that the programs implemented can be optimally integrated and complete. In addition it is necessary to collaborate with related institutions / offices such as the Environmental Agency, City Planning Agency. And the Sanitation Office so that the management of environmental health carried out will be more sustainable and sustainable. Improved implementation of monitoring of environmental health activities and expected feedback from reporting so that environmental health problems can be resolved immediately. It is expected that the community will participate to protect the surrounding environment, also want to implement a clean and healthy behavior program (PHBS) in their respective households so that they can and are able to improve their quality of life.

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