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RESEARCH ARTICLE

URL of this article: <http://heanoti.com/index.php/hn/article/view/hn20318>

The Effect of Clean and Healthy Life Behaviors (PHBS) on Diarrhea Incidence

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ABSTRACT

Diarrhea is the second disease that causes death in infants (children) under five years). Data and Information Indonesia Health Profile 2016, the number of diarrhea cases in Indonesia is 2,544,084 people or equivalent to 36.9% of the total incidence of diarrhea in 2016. South Central Timor District is the second area with the largest frequency distribution of outbreaks in Indonesia after Central Sulawesi (Depkes, 2011). The purpose of this study was to analyze the effect of PHBS households to diarrhea incidence in Southern Timor in 2016. The type of research used was observational analytic research with cross sectional study approach. The sample in this research was taken using simple random sampling technique with sample size 29 health centers. There is influence of variable percentage of PHBS households to diarrhea incidence in Southern Timor District. Nila R equal to 0,423 means closeness relation between independent variable with dependent variable is equal to 0423 (medium). Diarrhea rate was formulated with 23,884 minus multiplication of 0.174 with percentage of household with PHBS. The need for improved services outside the health center building for the discovery of diarrhea cases and the need for promotive and preventive efforts against the growing factors of diarrhea occurrence in South Central Timor District.

Keywords: PHBS, Households, Diarrhea

INTRODUCTION

According to WHO data in 2013, diarrhea is the second disease that causes death in infants (children) under five years). Children with malnutrition or poor immune systems are particularly susceptible to diarrhea. Diarrhea has killed 760,000 children every year. Most diarrhea people die due to dehydration or large amounts of fluid loss. According to data in the United States, each child has 7-15 episodes of diarrhea with an average age of 5 years and based on data in developing countries on average every child under 5 years experienced episodes of diarrhea three to four times per year.

The infant mortality rate in Indonesia due to diarrhea is about 2.8 million every year. Based on Data and Information Indonesia Health Profile 2016, the number of diarrhea cases handled in Indonesia amounted to 2,544,084 people or 36.9% of the estimated cases of diarrhea in 2016. East Nusa Tenggara province included in the top 10 provinces the number of cases of the highest diarrhea.

The district of South Central Timor is one of the districts in the province of East Nusa Tenggara. In terms of topographic and geographical district of South Central Timor the condition of the land surface is largely a mountainous and hilly area with an average slope of about 50%, only a small part of which is lowland. South Central Timor district is the second area with the largest frequency distribution of Outbreaks in Indonesia after Central Sulawesi. To achieve optimum health status for the community, the Government of South Central Timor District in the period 2015 - 2019 through its RPJMD in the health sector prioritizes maternal and child health services. The next priorities are health services for the poor, the utilization of health workers, the prevention of communicable diseases and the prevention of malnutrition. There are several potentially extraordinary diseases/epidemic diseases in South Central Timor district, including diarrhea, malaria, and dengue hemorrhagic fever (DHF).

Based on the profile of the Health Center in 2015 diarrhea occupied the top 10 most diseases in South Central Timor District. Diarrhea causes death a lot and greatly affects the economic loss to the people in South Central Timor District. Incidents of diarrhea handled in the district of South Central Timor in 2015 was 10,952 people spread in 32 subdistricts 35 health centers with diarrhea rate of 23.85 per 1000 population and the population at risk as many as 459,310 inhabitants⁽¹⁾. Healthy behaviors are proactive knowledge, attitude, and action to maintain and prevent the risk of disease, protect themselves from disease threats, and play an active role in the public health movement. Clean and Healthy Living Behavior is all health behavior that is done on the consciousness so that

family members or family can help themselves in the field of health and play an active role in health activities in society⁽²⁾.

The benefits of households implementing PHBS in households is that every member of the family becomes healthy and not susceptible to disease from various causes, the child in the household grows healthy and intelligent, family members are keen to work. 10 indicators PHBS is deliveries assisted by health personnel, giving baby exclusive breastfeeding, considering toddlers every month, using clean water, Washing hands with clean water and soap, using healthy latrines, eradicating mosquito larvae, Eating fruits and vegetables every day, doing physical activity every day, no smoking in the house. The purpose of this study was to analyze the effect of PHBS households on the incidence of diarrhea in the district of South Central Timor in 2016⁽³⁾.

METHODS

The type of research used was observational analytic research with cross sectional study approach. The study was conducted by using secondary data in the form of diarrhea incidence rate data per 1.000 population along with percentage of households living clean and healthy. The secondary data is obtained from the Health Profile of South Central Timor District in 2016. This research was located in Soe city of South Central Timor District of East Nusa Tenggara Province. Population in this research is all Public Health Centers in South Central Timor District that was counted 35 Health Centers, sample in this research taken by simple random sampling technique. The analysis in this research used simple linear regression.

RESULTS

Based on the Health Department profile in 2016 diarrhea occupied the top 10 most diseases in South Central Timor District. The number of diarrhea occurrences handled in the district of South Central Timor in 2016 was 7,211 people or 57.89% of the estimated number of diarrhea cases spread in 32 District 35 Health Centers with prevalence rate of 26.99 per 1000 population and the population at risk as much as 461,681 person⁽⁴⁾.

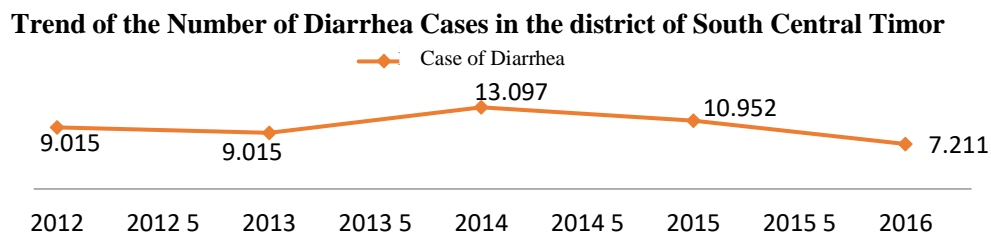


Figure 1. Trend of the number of diarrhea in South Central Timor District in 2016

Figure 1 showed that in the period of five years (2012-2016) the number of diarrhea cases in general the trend increased and decreased volatile, in 2013 to 2014 there was an increase in cases from 9,015 cases to 13,097 cases in 2014 and in 2015 decreased to 10,952 case, in 2016 again decreased to 7211 cases.

Table 1. Minimum, maximum, average and standard deviation of diarrhea incidence

Variable	Minimum	Maximum	Mean	Standard Deviation
Diarrhea Incidence	0.42	97.21	20.77	19.90

Source: Health Office Profile of South Central Timor District 2016

Table 1 shows that the descriptive statistics of the incidence of diarrhea in South Central Timor District in 2016. Variations in the incidence of diarrhea with a value of 20.77 19.90. Variations are considered high if the maximum and maximum values are very large, seeing the difference in minimum value and the maximum value on diarrhea occurrence in South Central Timor district can be concluded that the variation is very large.

Diarrhea rate of diarrhea per 1,000 highest population was found in Fatumnutu Public Health Center at 97.21 per 1.000 population, and the lowest ratio was at Kulain Public Health Center with ratio of incidence rate of diarrhea per 1.000 population was 0.42 (Figure 2).

Figure 3. showed from 35 health centers with diarrhea incidence grouped in three groups that is group of high diarrhea incidence with red color, group of incident of moderate diarrhea with orange color and group of low diarrhea incidence with green color. There are three public health centers with red color that are Fatumnutu, Nunukhniti, and Kolbano Health Centers. There are 14 public health centers entering in green or having a low incidence of diarrhea and 18 public health centers belong to orange or grouped groups with a moderate rate of diarrhea.

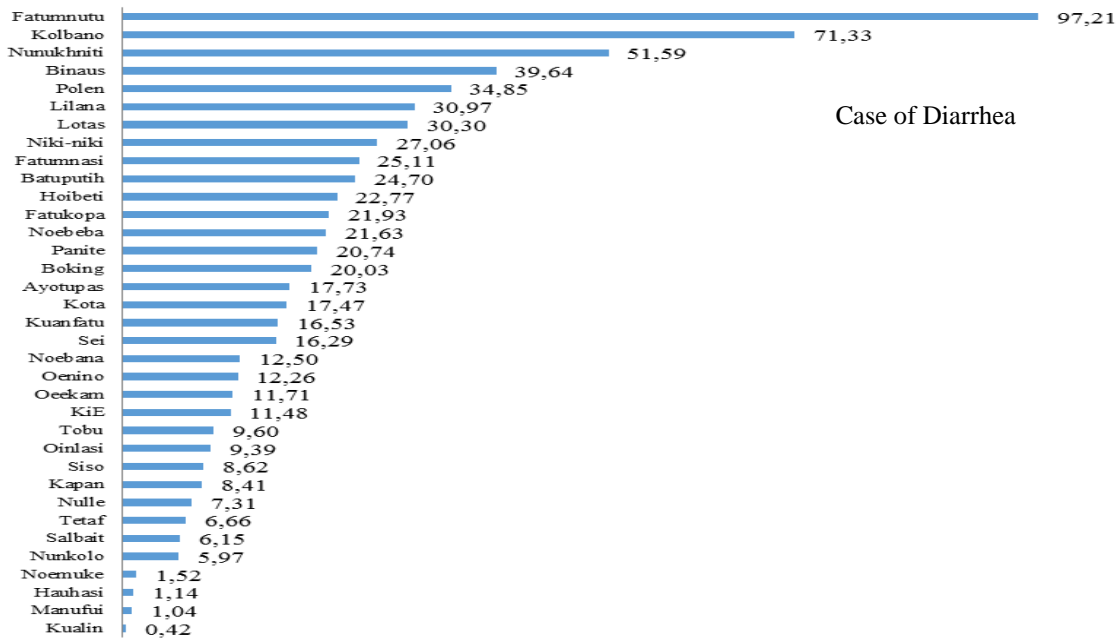


Figure 2. Distribution of Diarrhea based on Public Health Center in South Central Timor District 2016 (Source: Health Office Profile of South Central Timor District 2016)

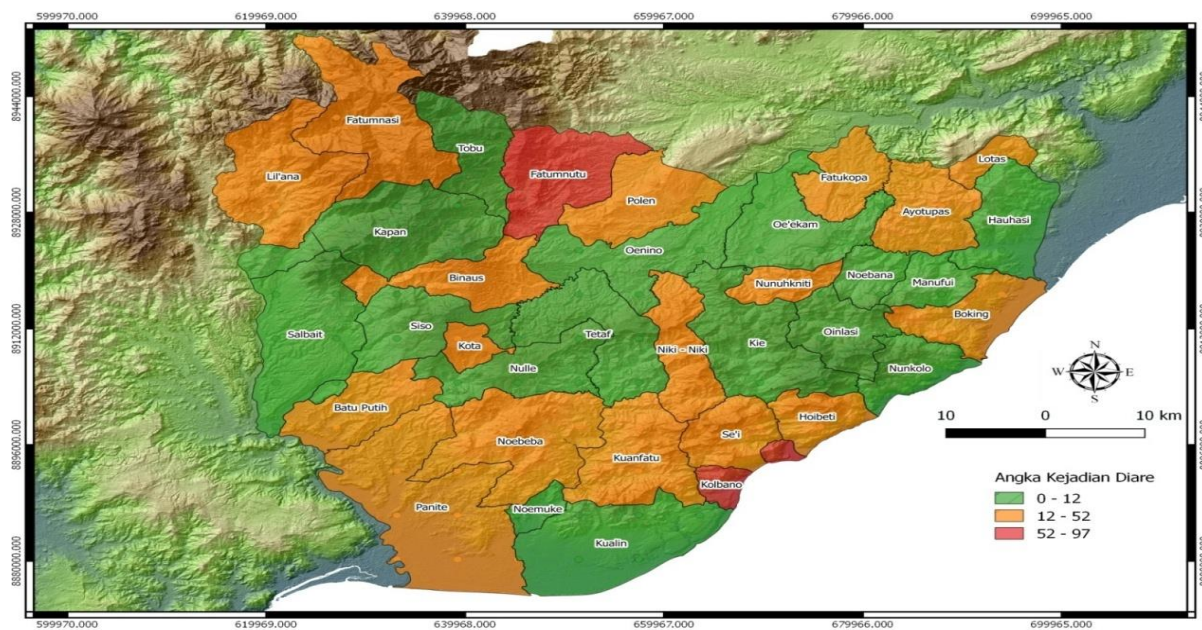


Figure 3. Map of distribution of diarrhea incidence in South Central Timor District 2016 (Source: Health Office Profile of South Central Timor District 2016)

Table 2. Result of Simple Linear Regression Analysis Effect of PHBS Household to Diarrhea Incidence in South Central Timor District 2016

Variable	Koefisien (B)	Sig	R	Information
Percentage of PHBS Household	-0,174	0.022	0.423	Influence
Constanta	23.884	0.000		

Source: Health Office Profile of South Central Timor District 2016

Based on Table 2 of p-value = 0.022, there is effect of percentage of PHBS Household on diarrhea incidence. R = 0.423 means closeness relationship between independent variable with dependent variable is 0.423 (medium). The model of simple linear regression equation obtained is:

$$Y = 23.884 - (0.174 \text{ (Percentage of PHBS Household)})$$

Diarrhea rate was formulated with 23.884 minus multiplication of 0.174 with percentage of PHBS household.

DISCUSSION

The case in South Central Timor District within five years (2012-2016) looks fluctuating. In 2013 to 2014 there was an increase in cases from 9,015 cases to 13,097 cases in 2014 and in 2015 declined to 10,952 cases, in 2016 again declined to 7,211 cases show the descriptive statistics of the incidence of diarrhea in South Central Timor District in 2016. Variations in diarrhea incidence with a value of 20.77 19.90. Variations are considered high if the maximum and maximum values are very large, seeing the difference in minimum value and the maximum value on diarrhea in South Central Timor district can be concluded that the variation is very large. The ratio of diarrhea rate of diarrhea per 1.000 of the highest population is in Fatumnutu Public Health Center of 97.21 per 1.000 population, and the lowest ratio in Kulain Health Center with the ratio of diarrhea incidence rate per thousand population is 0.42. There are 14 Public Health Centers entering in green or having a low incidence of diarrhea and 18 Public Health Centers belonging to orange or grouped groups with the incidence of moderate (moderate) diarrhea.

In terms of Topography and Geographic, South Central Timor is largely a mountainous and hilly area of only a small part of the lowlands. Transportation facilities are inadequate for most villages in South Central Timor district so it is very difficult to travel from the village to the nearest public health clinic and cost a lot. The number of villages in South Central Timor district is 266 villages and most of the villages do not have health workers placed in villages. Environmental health such as healthy homes, toilet ownership, handwashing behavior are continuously improved in South Central Timor district and are the main program in the prevention and promotion of prevention of diarrhea cases and other cases related to a healthy environment such as pneumonia, malaria and others. Residents in South Central Timor district are still many who have difficulty getting clean water for daily needs. Health counseling in promotion and discovery of cases of diarrhea in Intergrated service post and mobile health center activities continue to be improved in South Central Timor district.

The discovery of diarrhea cases is not only obtained in health services in the building but also on health services outside the building. The number of cases of diarrhea in South Central Timor District could be greater than that if external health services continue to be improved, especially in villages where there are no health workers. Based on the results of analysis with linear regression known there is a significant influence between the percentage of PHBS households on the incidence of diarrhea in the district of South Central Timor. This concludes that PHBS households in South Central Timor District have not been good enough.

The results are reinforced by Becker's (1979) opinion that health behavior, such as maintaining personal hygiene, preventing illness, choosing food, sanitation and so on, will certainly affect the health status of a person. While the factors that influence a person's behavior can be from within such as knowledge and intelligence as well as from the outside like the environment around both physical and non-physical which of course in every region is different. This is in line with the opinion of Sarwono (2004) that healthy behavior can also be formulated as all forms of experience and individual interaction with the environment, especially those concerning knowledge and attitudes about health, and its actions related to health. Lack of good response to sources of information and awareness about health can be a contributing factor. In general, if it is not known and does not take place well will certainly affect the degree of health both individuals and regions, and specifically in this research is the effect on the incidence of diarrhea.

CONCLUSION

The variation diarrhea incidence in in South Central Timor District is very large. There are 14 public health centers with a low incidence of diarrhea or 40% of the number of public health centers, 18 public health centers with the incidence of moderate diarrhea or 51.43% of the number of public health center and the remaining 8.87% public health center with high diarrhea. Although the incidence of high diarrhea is only 8.87% but should remain vigilant because there are 18 public health center that are almost red, otherwise it could be due to lack of discovery of diarrhea cases by the public health center.

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