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ANALYSIS ON ENVIRONMENTAL SANITATION IN PATIENTS TYPHOID FEVER AT DAYA GENERAL HOSPITAL MAKASSAR

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The research objective was to determine the environmental sanitation conditions around the community neighbour, especially in patients with typhoid fever viewed from the aspect of water supply, personal hygiene. This research is a survey research with a descriptive approach. Samples were chosen as the research object is the head of the household whose family whohad suffered from typhoid fever with a total sample of 38 people. Sampling was done by simple random sampling, whereas the data collected using questionnaires and field observations. The result showed that out of 38 samples based on indicators of drinking water supply to the category is not good for 26 samples (68.4%) compared to either category by 12 samples (31.6%). Also based on indicators of personal hygiene that most personal hygiene of patients with category Typhoid fever is not good for 25 samples (65.8%) compared to either category by 13 samples (34.2%). Based on indicators of family latrine with category qualified for 25 samples (65.8%) compared to either category by 13 samples (34.2%).

Introduction

Typhoid is a systemic disease caused by salmonella (typhy) (S typhy) or Salmonella paratyphi (S. paratyphi) that enter the human body and Typhoid also is a group of diseases that are easily transmitted and can affect many people that can cause epidemic (Djoko Widodo, 2006). This disease has been around since a few centuries ago. As it can be illustration, an events in Jamestown Virginia USA, which reported over 6,000 deaths due to the outbreak of typhoid in the period 1607-1624. Likewise, the war in South Africa late nineteenth century, where the British had lost 13,000 soldiers due to typhoid. In the case of death due to war itself is only 8000 soldiers (Harjono, 1980).

In a country that has been developed such as Indonesia, there is still typhoid diseases that, sporadic particularly with respect to activities of communities in a countries that are developing. In the USA the incidence of typhoid did not differ between men and women. Chronic intestinal career is more common in women with a ratio of 3.65: 1 with men. Approximately 85% of this career is found in women over 50 years. In general, typhoid fever reported 75% obtained in less than 30 years of age, the children usually above 1 year and 5 years and above most clinical manifestations lighter (Health Depertamen RI, 2006).

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Typhoid fever is one public health problem in Indonesia, because of morbidity and death are still high. To overcome these problems needs to be a coordinated guidelines for the prevention, treatment efforts need to be done. In addition to prevention efforts by improving control of risk factors. Such as environment plays an important role in disease transmission Typhoid Fever, especially to address the problem of "carrier" thus controlling environmental risk factors should be based on the note (Health Depertamen RI, 2007).

Construction of rapid development in large cities led to urbanization increasingly high that the population density is increasing, which in turn will affect the circumstances of the community environmental health, psychosocial and so forth. Moreover one of the serious problems that are often found in large cities is the growth of slum dwellings. With the slums of the many problems that arise in the community due to their poor environmental sanitation or ineligible allowing the breeding of infectious diseases which one example is typhoid fever.

Environmental sanitation is the health status of an environment that includes a housing, sewerage, clean water, and so on (Notoadmodjo, 2007). A lot of environmental problems that must be faced and very disruptive to the achievement of environmental health. Environmental health could be positive for the condition of the elements of biological and non-biological in ecosystems. If the environment is not healthy then becomes diseases element, but on the contrary if healthy environment it is precisely these ecosystems healthy. Less good behavior of humans has resulted in the emergence of a number of changes in the ecosystem and sanitation problems.

Transmission of diseases can occur anywhere, anytime from the age of a person can begin to consume food from outside, if food or beverages consumed less clean, usually only considered a case of typhoid fever, persistent fever more than a week never goes down with medicine fever impression reinforced with children lying passive, appear pale, abdominal pain, do not defecate or diarrhea a few days (Latif, 2008).

Department of Health data (2009) nationally, typhus patients who reported the age of 5-14 years 26% of cases, age 15-24 years 35% of cases, age 25-44 years 19% of cases, age 45-64 years 13% of cases, more than 65 years of 7% of cases. By gender, males 58% of cases and in women 42% of cases with some deaths. Furthermore, the number of cases in South Sulawesi Province there are 7.006 cases and among all districts are still the highest number of occurrences of typhoid fever are Gowa many as 2.338 cases (Provincial Health Office of South Sulawesi, 2002).

An increasing number of cases of typhoid fever due to typhoid fever is a multifactorial disease that means a lot of factors that trigger the occurrence of typhoid fever are personal hygiene, use of latrines, provision of drinking water and shelter as well as patients. A place to stay patient conditions or situations that may affect the incidence of typhoid fever.

In general, patients with typhoid fever who seek treatment in Daya hospitals Makassar can be overcome by intensive because it has provided a complete laboratory facilities for diagnosis of typhoid fever, in addition to the number of cases of typhoid fever in Daya hospitals increases from year to year, so authors interested in conducting research about Overview Environmental Sanitation Typhoid Fever Patients In Work Area Regional General Daya Hospital Pai Village District of Biringkanaya Makassar. This study aims to determine the analysis of environmental sanitation in patients with typhoid fever at the Daya General Hospital of Biringkanaya District Makassar.

Research Method

This is an observational study with a descriptive design that aims to see the picture of public health in the working area of the General Hospital of Eastern Makassar. The population in this study were all patients with fever were treated thyfoid road in the General Hospital of Eastern part of Makassar, amounting to 42 people based on data from hospital records in 2010. The sample in this study are patients with fever were treated thyfoid road at the General Hospital Power area of Makassar, amounting to 38 people based on data from hospital records. Systematic sampling with random sampling method, by dividing the number or approximate number of members of the population with the desired sample. The result is a sample intervals, samples taken by making a list of elements or members of the population at random between 1 and n. Presentation of data is done manually with the help of a calculator and a computer with the SPSS program, while the presentation of data can be done in the form of tables and text. The indicators used in this study, as follows: (1) the provision of drinking water, (2) the cleanliness of the individual, and (3) use of toilet.

Result Research

Distribution based Characteristics of Sample

Characteristic of Gender

The data show the characteristic of the respondent by gender as can be seen the Figure 1, below:

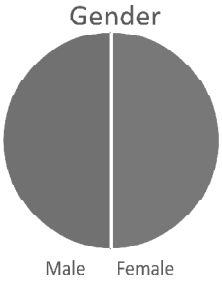

Figure 1: Characteristic of Gender

Graph 1 shows that of the 38 samples male sex as much as the female sample is respectively 19 samples (50%).

Characteristics of Age

The data show the characteristic of the respondent by age as can be seen the Table 1, below:

TABLE 1: DISTRIBUTION OF SAMPLES BASED ON AGE TYPHOID FEVER PATIENTS IN DAYA GENERAL HOSPITALS MAKASSAR

Age (year)	*Sample (n)*	*%*
0-4	4	10.5
5-9	11	28.9
10-14	17	44.7
15-19	1	2.6
≥ 20	5	13.2
Total	38	100

Source: Primary Data, 2014

Table 1 shows that of 38 samples at most patients aged 10-14 years is 17 samples (44.7%) and lowest in the age group 15-19 years is 1 sample (2.6%).

Characteristic Education

The data show the characteristic of the respondent by education as can be seen the Table 2, below:

TABLE 2: DISTRIBUTION OF SAMPLE BY EDUCATION IN DAYA GENERAL HOSPITALS MAKASSAR

Level Education	*Sample (n)*	*%*
Do not finish primary school	2	5.3
finish from primary school	9	23.7
finish from Junior High School	16	42.1
finish from Senior High School	11	28.9
Total	38	100

Source: Primary Data, 2014

Table 2 shows that of the 38 samples at the most junior level of education completed is 16 samples (42.1%) and lowest in the elementary school which is 5 samples (5.3%).

Samples Distribution Based Variable Examined

The data show the samples distribution based variable examined as can be seen the Table 3, below:

TABLE 3: DISTIRUBUSI SAMPLES BASED VARIABLE EXAMINED

No	*Variable Examined*	*Good*		*Not Good*		*Total*	
		n	*%*	*n*	*%*	*n*	*%*
1	Water Supply	12	31.6	26	68.4	38	100 %
2	Individual hygiene	13	34.2	25	65.8	38	100 %
3	Utilization Latrine	25	65.8	13	34.2	38	100 %

Source: Primary Data, 2014

Based on Table 3 variables showed that the drinking water supply of 38 samples at most the provision of drinking water to the category is not good that 26 samples (68.4%) compared to either category, namely 12 samples (31.6%). Personal hygiene variables showed that of 38 samples at most the personal hygiene of patients with category Typhoid fever is not good that 25 samples (65.8%) compared to either category, namely 13 samples (34.2%). For variable use of toilet of 38 samples showed that most families are privy to both categories is 25 samples (65.8%) compared to either category, namely 13 samples (34.2%).

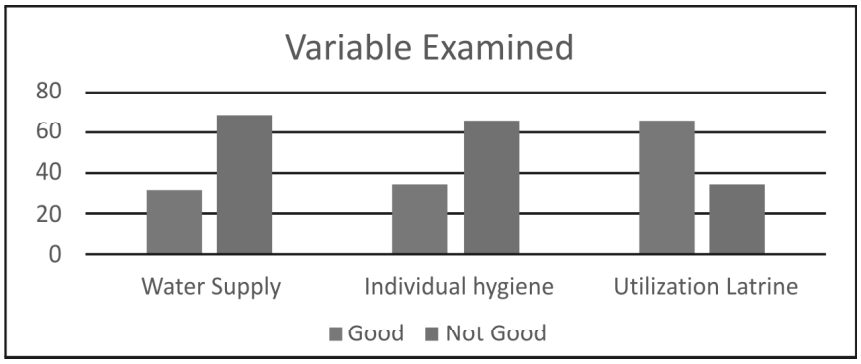

Figure 2: Histogram of Variable Examined

Analysis of Relationship between the Variables

The data show the analysis of relationship between the variables as can be seen the Table 4, below:

TABLE 4: DISTIRUBUSI SAMPLES BASED VARIABLE EXAMINED

No	*Variable Examined*	*Good*		*Not Good*		*Total*	
		n	*%*	*n*	*%*	*n*	*%*
1	Water Supply	12	31.6	26	68.4	38	100 %
2	Individual hygiene	13	34.2	25	65.8	38	100 %
3	Utilization Latrine	25	65.8	13	34.2	38	100 %

Source: Primary Data, 2014

Based on Table 4 variables indicate that the drinking water supply of 38 samples that have good drinking water facilities suffering from typhoid fever as many as 12 people (31.6%) and that have good drinking water facilities are not suffering from typhoid fever as many as 26 people (68.4%). Personal hygiene variables showed that of the 38 samples that have good personal hygiene is suffering from typhoid fever as many as 13 people (34.2%) and who have no good means of an individual suffering from typhoid fever as many as 25 people (65.8%). Variable use of toilet shows that of the 38 samples that had toilet eligible suffering from typhoid fever as many as 25 people (65.8%) and who have a family latrines ineligible suffering from typhoid fever as much as 13 people (34.2%).

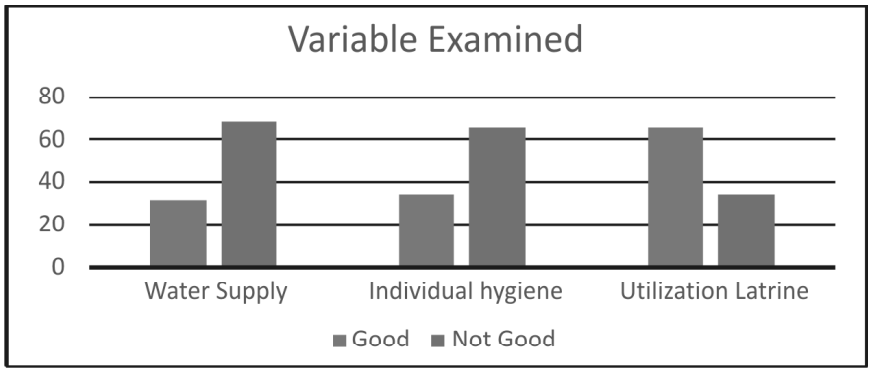

Figure 3: Histogram of Variable Examined

Discussion

Based on the medical records report of Daya hospitals (2010), typhoid fever morbidity data hospitalizations in 2008, according to the age group 0-1 years were 48 cases with ambulatory patients, aged 1-4 years are numbered 79 cases consisted of patients hospitalized was 6 cases and patients with as many as 73 outpatient cases, aged 5-14 years amounted to 55 cases consisted of patients hospitalized were 27 cases and patients with outpatient as many as 28 cases, aged 15-24 years were 60 cases consisted of patients hospitalization was 27 cases and patients with a total of 33 outpatient cases, aged 25-44 years were 45 cases consisted of patients hospitalized were 20 cases and patients with outpatient as many as 25 cases, while 45-64 year amounted to 9 cases comprising of patient hospitalization was 3 cases and patients with outpatient care as much as 6 cases, whereas age <65 years amounted to 1 case with patient hospitalization. So the number kesuluruhan typhoid fever patients who are hospitalized or the patient walks as much as 297 cases.

Typhoid fever is still considered one of the impacts by their poor environmental sanitation behavior is applied. Dissemination and transmission caused by the vector

is a living organism that can move or transmit an infectious agent from the source of infection for vulnerable landlady, vectors that carry serious diseases transmitted to humans include insects (flies, mosquitoes), animals -binatang that live in water (shells), land-dwelling animals (dogs, cats, pigs). Transmission of disease to humans through insect vectors known as arthropod born disease, or often referred to as vectro borne disease. In addition to the factors that greatly influence the incidence of fever typhoidal based on Dewinta (2007) research conducted by the finding that the provision of clean water and personal hygiene use of toilet family, and based on research conducted by the authors who will be described as follows:

Water Supply

Based on the results of research on drinking water supply shows that of the 38 samples of at most the provision of drinking water to the category is not good that 26 samples (68.4%) compared to either category, namely 12 samples (31.6%), lack of attention to the public and government is one factor causes typhoid fever because of problems such as the habit of drinking water people consume water without boiling, and although the water is bailed and then how the presentation is not as good as a container that does not have a cover also potentially cause disease in addition to the lack of public knowledge about typhoid fever is also one of the obstacles because knowledge is very important terahadap incidence of fever tipfoid as research conducted by Iskandar (2005) who found that 75% of patients with typhoid fever have less knowledge suffering from typhoid fever as the results of the above studies in which most samples education only up to junior high school that is only 42.1%.

Results of field observations, samples of water used for everyday purposes that do not qualify due to topography research area is flat and low, and often flooded due to water lakes and ditches that lead to seep into the soil moist so that the cavities/ pores soil pores filled with water (air portion filled all the water, the air is zero).

This state of bacteria to facilitate travel to the source of water used daily which when consumed can lead to people stricken with typhoid fever. This is according to research conducted (Arif, 2001), where the transmission of typhoid fever can occur through food and drink contaminated with the bacteria salmonella typhi, can then also through faeces, urine carrier of germs.

This is according to research conducted by Supriadi (2005) which found that families who use drinking water that does not meet the physical requirements, the risk for typhoid fever as much as 2.38% greater than the families who use drinking water that meets the physical requirements.

Water sources are not eligible because the conditions were cracked floors wells and some are not having the floor so the water is polluted, it is because of people's daily activities discard used washing water around the springs, causing water seepage resulting in water sources that do not qualify.

Individual Hygiene

Typhoid fever exist throughout the world, and more encountered in many developing countries with high population density, as well as environmental health did not qualify, in addition to the most common in children and young adults, perhaps because of the frequency of exposure to the more serious in the age group This, because often eat meals outside and not yet aware of the importance of hygiene and environmental sanitation, as in the results by age group above typhoid fever patients in table 6.2 which shows that of the 38 samples at most patients aged 10-14 years is 17 samples (44.7%) and lowest in the age group 15-19 years is 1 sample (2.6%).

Individual hygiene issue is a very complex problem, which is interrelated with the onset of the disease both infectious disease and infectious disease. Health status will be achieved optimally, when supported by personal hygiene every person in a community or workplace. Individual hygiene is essentially a condition meeting the requirements of the physical health of an individual or individuals. Personal hygiene is very influential in the occurrence of infectious diseases. To avoid various infectious diseases requires awareness of the individual to meet the need for cleanliness.

This can be realized by having a clean living habits, based on the results of research conducted found that of 38 samples at most the personal hygiene of patients with category Typhoid fever is not good that 25 samples (65.8%) compared to either category, namely 13 samples (34.2%), presence of personal hygiene is lacking in individuals is one of the factors trigger a variety of infectious diseases.

Infectious diseases can occur in individuals who have less personal hygiene due to individuals who lack their individual kebearsihan usually not memperhatikn cleanliness of food, clothing, to the cleanliness of housing.

While the disease is usually very fond of bacteria to breed in foods that are not clean, in Tamalanrea despite being encouraged to school-school counseling by health pertugas and NGOs is still too high incidence of typhoid fever this could be due to a lack of parental supervision and the factors surrounding environment.

Based on research conducted by the July (2000) Some diseases caused Kareba food hygiene that do not meet health requirements. Food can be contaminated with microbes for several things: Cultivating food or eating with dirty hands, he bet Cooking with pets, Using dirty rag to clean the table, eat less clean furniture, kitchen, cookware and eating dirty, food that has fallen into the land is still edible, food stored without lids so that insects and rodents can reach them, food is washed with dirty water, food contaminated with animal feces due to roam around it, Vegetables and fruits are grown on contaminated soil, Eating vegetables and fruits contaminated food processors who are sick or a carrier of the disease, Market dirty, a lot of insects and so on.

Utilization Latrine

Excreta disposal is an essential part of health where no sanitary disposal of feces that can contaminate ground water and other water sources. Based on the results of research conducted shows that most of the 38 samples were privy to the category of eligible families that 25 samples (65.8%) compared to either category, namely 13 samples (34.2%). These results indicate that there are still many people who do not have latrines and even though having no sanitary latrines but other than that there are still many children even adults who throw feces in the garden/backyard, sewer, where it is very potential to increase vector proliferation causes typhoid fever.

As we know that the excreta disposal are breeding grounds for insects, especially mosquitoes, flies, and cockroaches are always adverse impact may even be able to act as vectors of human disease agent. One vector of the most widely and easily transmit disease and is flies because it tends to breed in garbage and human waste, especially when there is light and often perch on food and human skin and can then lead to diseases such as diarrhea, typhoid fever and others.

Tamalanrea area is an area that most often floods especially during the rainy season that is clogged diselokan this case aggravated by people's habits or children diselokan and a big waste of used washing water or urine were directly channeled in sewer overflow to the streets, especially in areas BTP and BTN Between and surrounding areas, the lack of attention from the local government and the lack of public awareness to clean gutters and forbid their children not to throw feces in the ditch. Cultural cooperation and remind each other, especially in urban areas such as Tamalanrea very rarely visible because of busy each community even recognize and greet neighbors is very rare.

Based on the results of research conducted by Ungke (2006) that turned out to have nothing to do with the incidence of typhoid fever with the use of toilet where he describes the community's efforts to isolate the stool from becoming breeding grounds for insects, especially flies, mosquitoes and cockroaches that act as vectors that cause disease in humans , Besides, the behavior of the public about healthy living and clean the better example always cover the food being served so that vectors such as flies that carry disease germs are not to be eaten.

Conclusion

Of the 38 samples at most the provision of drinking water to the category is not good that 26 samples (68.4%) compared to either category, namely 12 samples (31.6%). Of the 38 samples at most the personal hygiene of patients with category Typhoid fever is not good that 25 samples (65.8%) compared to either category, namely 13 samples (34.2%). Of the 38 samples at most are privy to the category of eligible families that 25 samples (65.8%) compared to either category, namely 13 samples (34.2%).

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