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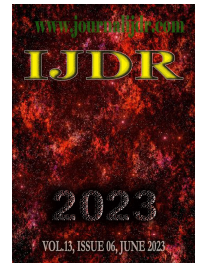
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RESEARCH ARTICLE

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FACTORS ASSOCIATED WITH THE INCIDENCE OF SCABIES IN PATIENTS IN SENTRU SAUDE COMUNITARIO MUNICIPIO DILI 2022

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ABSTRACT

Factors Related to the Incidence of Scabies in Patients at *Sentru Saude Comunitario Municipio Dili 2022*. Scabies is a disease that is affected human skin. According to D. Juanda 2006, Scabies is an itchy disease of the skin caused by mites or small fleas called *Sarcoptes scabiei hominis* variants, characterized by complaints of itching, especially at night and young people are transmitted through direct or indirect contact. Direct contact occurs when there is contact with the skin of the sufferer for example shaking hands, sleeping together, and having sexual relations. For indirect contact through objects that have been used by sufferers such as clothes, towels, pillows, and others. Scabies regarding all socioeconomic classes, women, and children experience a higher prevalence of scabies. In the season of the stop. Prevalence also tends to increase compared to summer. Factors related to the incidence of scabies in *Sentru Saude Comunitaria Municipio Dili* include low socioeconomic, poor hygiene, social relations with alternating partners, and demographic and ecological development. The main objective of this study was to find out the factors associated with the incidence of scabies in patients in the *Sentru Saude Comunitaria Municipio Dili*. The method used is observational analysis, with a cross-sectional (study cross-cutting). The results of the study show that the housing environmental sanitation variable lacked clean water and personal hygiene significantly affected the disease of scabies in patients in the *Sentru Saude Comunitaria Municipio Dili*. So scabies occurs because of poorly maintained environmental sanitation, lack of clean water for daily necessities and not being awake (personal hygiene), and targets all socioeconomic classes of women and children.

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INTRODUCTION

Timor - Leste is a developing country, most of which still have many deficiencies in the health sector. Therefore, Timor - Leste needs reliable and qualified human resources to carry out national development in all fields of health. The national development goals in Timor - Leste are for a just and prosperous society. According to a survey by the Ministry of Health conducted by the National Statistics Center, in 2017 there were 29,258 cases of scabies (22.8%), and in 2018 there were 18,502 cases of scabies (16.53%). And in 2019 there were 8,979 cases of scabies (12.12%). Scabies occurs in the people of Timor-Leste due to a person's habit of dealing with scabies and poor hygiene, clean and healthy living behavior (PHBS), especially for personal hygiene in general, receives less attention, and coupled with the knowledge that tends to be poor about health and Unhealthy behavior, such as hanging clothes in the room, not drying clothes in the sun, and exchanging clothes and personal objects, such as combs and towels, causes scabies to spread quickly.

Based on data from *Sentru Saude Comunitario Comoros, Municipio Dili*, in 2017 there were 3,227 scabies sufferers. And in 2018 there were 2,385 people with scabies, in 2019 there were 132 people with scabies, and in 2020 there were 151 cases. Based on data obtained from *Sentru Saude Comunitario Becora Municipio Dili*, in 2017 there were 2,460 scabies sufferers. And in 2018 there were 1,379 scabies sufferers. And in 2019 there were 970 scabies sufferers. And in 2020 the number of cases is 132. Based on data obtained from *Sentru Saude Comunitario Bairro Formosa Municipio Dili*, in 2017 there were 1,092 scabies sufferers. And in 2018 there were 970 scabies sufferers. And in 2019 there were 565 scabies sufferers, and in 2020 the number of cases was 129. Thus, the researchers assume that the occurrence of scabies in patients at *Sentru Saude Comunitario Municipio Dili* may be caused by several related factors, such as the sanitation of the home environment, the problem of lack of clean water and *personal hygiene*, cleanliness of rooms, occupants of the house. lack of clean water and *personal hygiene* (factors related to *personal hygiene*, signs, and symptoms, maintenance of *personal hygiene* matters including *personal hygiene* and *personal hygiene*

goals). While the dependent variable is the incidence of scabies cases in patients aged over 17 years. Based on the data conducted by the researchers, it was shown that the highest incidence of scabies occurred in groups of people with a low economy, personal hygiene, and dense residential neighborhoods. In addition, the lack of knowledge and clean living behavior of the community about how the spread of scabies is high in groups of people. From the description above, the authors are interested in conducting research with the title "Factors Associated with the Incidence of Scabies in Patients at the Health Community of Dili Municipality in 2022"

Formulation of the problem

In this writing, the writer can formulate the problem as follows:

- Is sanitation in the home environment related to the incidence of scabies in patients at the Health Community of Dili Municipality?
- Can the lack of clean water be related to the incidence of scabies in the Health Community of Dili Municipality?
- What is the relationship between personal hygiene and the incidence of scabies at the Health Community of Dili Municipality?

LITERATURE REVIEW

Definition of Scabies: According to D. Juanda 2006, Scabies is an itchy disease of the skin caused by a small mite or tick named *Sarcoptes Scabiei* variant *homininis*, characterized by complaints of itching, especially at night and easily transmitted through direct or indirect contact. Direct contact occurs when there is contact with the patient's skin, for example shaking hands, sleeping together, and having sexual intercourse. As for indirect contact through objects that have been used by sufferers such as clothing, towels, pillows, and others. According to the WHO World Health Organization report, (2012) that half of the world's population is at risk of skin disease and it is estimated that there are around 216 million cases in 2015.

Handoko 2008, scabies disease is also known by the name *the itch*, scabies, or agogo itch. Scabies is found in all countries with varying prevalence. Stone et al, (2008). It is estimated that more than 300 million people worldwide are affected by scabies. Prevalence tends to be higher in urban areas, especially in densely populated areas. Scabies affects all socioeconomic classes, women and children experience a higher prevalence of scabies. In winter the prevalence also tends to increase compared to summer. Strina et al, (2013) in Brazil, South America, the prevalence of scabies reached 18%, in the West African continent 28.33%, in the city of Enugu, Nigeria, 13.55%, in Pulau Pinang, Malaysia, the prevalence of scabies reached 31%. Zayyid et al, 2013, in Malaysia The prevalence of scabies in boarding houses for the elderly in Pulau Pinang in 2010 was 30%. When the earthquake and tsunami natural disasters hit Nanggroe Aceh Darussalam, scabies was the second most common disease in refugees. At that time around 26.4% of the displaced Lhokseumawe residents were infested with scabies. Scabies outbreaks have also occurred among Syrian refugees in northern Lebanon. In Sierra Leone as many as 86% of children living in densely populated shelters suffer from scabies. In the evacuation, 5-6 families live in one house. The development of scabies in refugee camps is due to overcrowding, low hygiene levels, lack of clean water, and poor waste management.

Raharyani LD 2007, The factors related to the incidence of scabies include low socioeconomic status, poor hygiene, sexual relations with multiple partners, demographic and ecological development. Scabies is also called a community disease because it is easily transmitted and develops very quickly, especially in densely populated areas. SIS MdS (2009), the country of Timor-Leste currently needs to provide knowledge about how important health is in society so that from not knowing to knowing, not being able to be able to deal with health problems, one of which is the case of scabies. Saraswati (2015), with a high incidence of scabies most commonly occurring in groups of people with a low economy, the increase in

cases is influenced by endurance, personal hygiene, clean living behavior, living environment and is also influenced by public knowledge because knowledge it is very important war for health. Soedarto (2009), scabies is a skin infection caused by a small mite (mite) *Sarcoptes scabiei* that lives in the skin of sufferers. Mites which are widespread throughout the world can be transmitted from animals to humans and vice versa. This mite measures 200-450 microns, has an oval shape, and the dorsal part is convex while the ventral part is flat. Siregar (2005), Scabies is a skin disease caused by investment and sensitization by the mite *Sarcoptes scabiei*. Scabies is not harmful to humans. The presence of itching at night is the main symptom that interferes with activity and productivity. Scabies is common in (1) densely populated areas, (2) slum areas, and (3) areas with poor hygiene. Scabies tends to be high in school-age children, teenagers, and even adults.

Epidemiology of Scabies Disease: According to Sungkar (2006), there is an assumption that every 30-year cycle there will be a scabies epidemic. Many factors support the development of this disease, including low socio-economic, poor hygiene, and demographic and ecological development. Scabies disease can occur in one family, or nearby neighbors, and can even occur throughout the village. The cause and process of scabies disease develop from a causal chain to a process of disease occurrence, namely the process of interaction between humans (hosts) and their various characteristics (biological, physiological, psychological, sociological, and anthropological) with causes (agents) and with the environment (environment)... Scabies is an endemic disease in many communities. *Sarcoptes scabiei* belongs to the anthropoid group, class *Arachnida* of the order *Acarina*, superfamily *Sarcoptes*. In humans, it is called *Sarcoptes scabiei* var *homininis*. In addition, there are other *Sarcoptes scabiei*, for example, goats. Djuanda (2014), The cause of *scabiei* scabies disease was known more than 100 years ago as a result of an infestation of a mite called *Acarus scabiei*, or in humans it is called *Sarcoptes variant hominis*. *Sarcoptes scabiei* belongs to the phylum *Arthropoda*, class *Arachnida*, order *Acarina*, super family *Sarcoptes*. Heukelbach, et al, (2009), scabies is a disease caused by ectoparasites, which is generally neglected so that it becomes a common health problem throughout the world that can infect all people of all ages, races, and socioeconomic levels. Triplehorn, Johnson Ciftci, et al, (2010), ectoparasites are parasitic organisms that live on the surface of the host's body, sucking blood or looking for food on the hair, skin reeds and sucking the host's body fluids. significantly unhealthy life. Ectoparasite infestations are *sporadic*, *epidemic*, and *endemic*.

Pathogenesis: Boerdiardja, (2007), fertilized female mites can make tunnels in the skin to the border of the stratum corneum and stratum granulosum at a rate of 0.5-5 mm per day, in this tunnel, the female mites will lay 2-3 eggs every day, a female mite can lay as many as 40-50 eggs during its life cycle which lasts approximately 30 days. The eggs will hatch within 3-4 days and become larvae that have three pairs of legs, after three days the larvae then become nymphs with four pairs of legs and then become adult mites. The life cycle of mites from eggs to adults takes 10-14 days, at room temperature (12 °C with a relative humidity of 40-80%) mites can still live outside the host for 24-36 hours. Wahidayat (1998), this parasite becomes trenches in the epidermis, causing itching which damages the patient's skin. Scabies is a disease that is easily transmitted and is caused by the infestation of the mite *Sarcoptes scabiei* var *homininis* which makes tunnels in the stratum corneum of the skin, especially in predilection sites. Scabies is a skin infestation by the *Sarcoptes scabiei* mite which causes itching. This disease can be found in poor people who live with substandard hygiene conditions, although it is also common among clean people. Scabies is often found in sexually active people. However, this parasite infestation does not depend on sexual activity because these lice often infect the fingers, and hand touching can cause infection. In children, staying overnight with an infected friend or sharing clothes with them can be a source of infection. Health workers who have prolonged physical contact with scabies patients can also become infected. The adult female flea tunnels into the superficial layers of the skin and resides there for the rest of her life. With jaws and sharp edges of the joints of its front

legs, the flea will widen the tunnel and will lay two to three eggs a day for two months. Then the female flea died. The larvae (eggs) hatch within three to four days and progress through the larval and nymph stages to become adults in about ten days. Aisiyah (2014), scabies is a skin disease caused by infestation and sensitization by the mite *Sarcoptes scabiei* which is attacked by thin and moist parts, for example, skin folds in adults. In infants, because the whole skin is still thin, then the whole body can be attacked. Siregar (2010), this scabies is not harmful to humans but the presence of itching at night is the main symptom that interferes with activity and productivity. This scabies disease spreads a lot in densely populated environments, slums, environments with poor hygiene levels. Scabies tends to be high in school-age children, teenagers, and even adults.

Mode of transmission (Transmission)

- Direct contact (skin-to-skin contact), for example, shaking hands, sleeping together, and sexual intercourse.
- Indirect contact (through objects), for example, clothing, towels, bed sheets, pillows and others.

Sungkar (2010), transmission is usually by fertilized female *Sarcoptes scabiei* or sometimes by larval forms. It is also known as *Sarcoptes scabiei var omnis* which can sometimes be transmitted to humans, especially to those who keep a lot of pets such as dogs. Ronald (2005), transmission can occur by moving the fleas directly from the patient's skin to the skin of other people. However, transmission can occur indirectly, for example, the tick attaches to the patient's clothing, bed linen, bed, towels and so on. From these items fleas move to other people. The opportunity to move is enormous, because fleas can still live on the items above for about two days. Noor (2007), transmission of disease from person to person is a very important form because the nature of this disease is more frequent in epidemics and easily spreads in society. In view of its nature, diseases that are transmitted from person to person have three main characteristics that need special attention, including generation time, community immunity and secondary attack rates. Djuanda (2010), scabies skin disease is a disease that is easily transmitted. This disease can be transmitted directly (skin to skin contact) for example by shaking hands, sleeping together, and through sexual intercourse. Indirect transmission (through objects) for example clothing, towels, sheets, pillows and blankets. Bandi & Saikmuar Cordoro *et al* (2014), while *Sarcoptes scabiei var mange* is transmitted to humans through contact with various wild animals, domesticated animals and farm animals, the name *Sarcoptes* scabies is derived from the Greek words, namely *sarx* which means skin and *koptein* which means pieces and Latin word *scabere* which means to scratch. Literally scabies means itching on the skin so that the activity of scratching the itchy skin appears. Currently the term scabies means skin lesions that appear due to mite activity.

Clinical Symptoms: Ronald (2010), a symptom that is easy to recognize is itching, especially at night when male fleas roam everywhere, then solid spots, bubbles, hives and usually appear in their favorite places. various forms of skin disorders. Boediardja (2007), the main clinical symptom of scabies is itching, especially felt at night (*nocturnal pruritus*) or when the weather is hot and sweaty, due to increased mite activity when body temperature increases. Itching accompanied by other symptoms, usually occurs 3-4 weeks after being sensitized by mite products under the skin. Boediardja (2007), lesions that appear on the skin are generally symmetrical and the main predilection sites are between the fingers, flexors, elbows and knees, wrists, *areolamamae*, *umbilicus*, penis, axillae, lower abdomen and buttocks. In children less than two years of age, the lesions tend to be all over the body, especially the head, neck, palms and soles, whereas in older children the predilection for lesions resembles that of adults. In infants, lesions can be found on the face and scalp, especially those who drink breast milk (ASI) from mothers who suffer from scabies. Boediardja (2007), on the skin you will see erythematous papules measuring 1-2mm as an initial symptom of infestation. However, because it is very itchy and due to scratching, erosion, pustules, excoriations, crusts and secondary infections can

occur which cause the primary lesion to become blurred and not distinctive. Yessicles can also be seen along the tunnel where mites are usually found at the ends. According to Djuanda (2010) there are four cardinal signs, namely:

- *Nocturnal pruritus*, itching at night caused by the activity of these mites is higher in hotter and more humid temperatures
- This disease attacks in groups, for example in a family, usually all family members are infected, as well as in a densely populated village, most of the adjacent neighbors will be attacked by these mites. Known hyposensitized state in which family members are affected. Although experiencing mite infestation but does not give symptoms. This patient is a carrier (*carrier*).
- There is a tunnel (*cuniculus*) in predilection sites which are white or grayish in color, in the form of straight or winding lines, an average length of 1cm, at the end of the tunnel papules or vesicles are found. If a secondary infection occurs, the skin rash becomes polymorphous (pustules, excoriations, etc.). Predilection sites are usually places with a thin stratum corneum, namely between the fingers, the volar part of the wrist, buttocks, external genitalia (male) and lower abdomen. In infants can attack the soles of the feet and palms.
- Finding mites, is the most diagnostic thing, one or more life stages of these mites can be found.

Diagnostics Assistant is: The diagnosis is usually established based on a history of itching at night which causes lethargy and looks tired due to lack of sleep, a typical distribution of lesions, a history of itching/the same lesions in other family members, and symptoms disappear quickly after administration of anti-scabies drugs (Boediardja 2007). The definite diagnosis is established by finding mites on microscopic examination which can be done in various ways, namely: Skin scraping, Needle removal, Epidermal Shave biopsy, Burrow ink test, Tunnel curettage, Topical tetracycline, Skin smear, *Epiluminescence dermatoscopy*

Nodular scabies: This form is in the form of itchy reddish-brown nodules, the nodes are usually found in closed areas, especially in the male genitalia, inguinal and axillary nodes. This occurs as a hypersensitivity reaction to the scabies mite. In nodes that are more than one month old, mites are rarely found. The nodes may persist for several months to a year despite anti-scabies and corticosteroid treatment.

Scabies transmitted by animals: In America the main source of scabies is dogs. This disorder is different from human scabies, in that there is no tunnel, it does not attack between the fingers and external genitalia. The lesions are usually found in people who often contact/hug pets, namely the thighs, stomach, chest and arms. Period (4-8 weeks and can heal) and can heal on their own because scabies var animals cannot continue their life cycle in humans.

Norwegian scabies: Norwegian scabies or crusted scabies is characterized by extensive lesions with generalized *scaly crusts* and thick *hyperkeratosis*. Sites of predilection are usually hairy scalp, ears, buttocks, elbows, knees, palms and soles which may be accompanied by nail *dystrophy*. In contrast to ordinary scabies, the itch in people with Norwegian scabies is not prominent, but this form is very contagious because the number of mites that infect is very large (thousands). Norwegian scabies occurs due to *immunological deficiency* so that the body's immune system fails to limit the proliferation of mites that can multiply easily.

Classification of Scabies

According to Sudirman (2009) scabies can be classified as follows:

Scabies in clean people (*scabies in the clean*)

- Scabies in infants and young children
- Nodular scabies (*nodular scabies*)
- Scabies *in cognito*

- Scabies transmitted by animals (*animal transmitted scabies*).
- Crusted scabies (*keratotic scabies crustes*)
- Scabies lying in bed (*bed ridden*)
- Scabies accompanied by other sexually transmitted diseases
- Scabies and *acquired immunodeficiency syndrome* (AIDS)
- *Dishidrosiform scabies*

Prevention: The important thing in prevention efforts is personal hygiene, the habit of washing hands, feet or bathing regularly twice a day is a policy effort to prevent this skin disease and it is necessary to pay attention to food nutrition, (Ronald 2009). According to Chin 2010, the community has a clean and healthy lifestyle, among others by paying attention to environmental cleanliness. The environment is all internal and external conditions that affect and result in the development and behavior of a person and group. The external environment can be physical, chemical or psychological that is received by the individual and prepared as a threat. While the internal environment is a state of mental processes in the individual's body (in the form of experiences, emotional abilities, personality) and biological stressor processes (cells and molecules) originating from the individual's body (Nursalam 2007).

Definition of Sanitation: One of the vital human needs is sanitation where sanitation is a reflection of the regularity of people's lives, where through sanitation people can see the level of understanding and concern in terms of cleanliness of the surrounding environment. The sustainability of human life is very dependent on the health achieved, so that sanitation is very necessary in society, of course, to achieve a more equitable life with sanitation in people's lives (Ministry of Health RI, 2010). According to WHO, 2008 environmental sanitation (*environmental sanitation*) is an effort to control all human physical environmental factors that may cause or give rise to things that are detrimental to physical development, health and human survival. Environmental sanitation can also be interpreted as activities aimed at improving and maintaining standards of fundamental environmental conditions that affect human well-being. These conditions include a clean and safe water supply, efficient disposal of human, animal and industrial waste, protection of food from biological and chemical contamination, clean and safe air, clean and safe housing. Environmental health is a situation or condition where the environment is located and under certain conditions can cause health problems. The environment is one of the most influential factors in determining a person's health status. Health problems are a very complex problem and are interrelated with other problems besides health itself. Solving public health problems, is not only seen from the health itself, but must be seen from all aspects that have an impact on "health-illness" or health. Many factors affect health, both individual health and public health (Anwar, 2008).

Clean water supply: Sumantri (2011) water is very important for human life, humans will die faster from lack of water than from lack of food. In the human body itself consists mostly of water. Water is a source of life for humans to be able to survive without food in a few weeks, but without water humans will die in just a few days. Water is needed by humans, animals and plants for their life needs. Notoatmodjo (2010) human needs for water are very complex, including for drinking, cooking, bathing, washing (various kinds of laundry) and so on. According to WHO (2010) in developed countries everyone needs between 60-120 liters of water per day. Meanwhile, in developing countries, each person needs between 30-60 liters of water per day. Among the very important uses of water is the need for drinking. Therefore, for the purposes of drinking water (including for cooking) water must have special requirements so that the water does not cause disease to humans *enabling* factors that can be positive or negative, therefore a person's attitude of obedience is greatly influenced by the facilities and facilities available. Water is the main requirement for life processes on earth so that there is no life if there is no water on earth, however water can be disastrous if it is not available in the right conditions, both in quality and quantity. Relatively clean water is highly coveted by humans, both for daily living needs, for industrial needs, for urban sanitation, and for agricultural purposes.

Today water is a problem that needs serious attention, to get good water according to certain standards, is currently an expensive item, because water has been polluted by various kinds of waste from various human activities, so that the quality of the resource is water has decreased. Likewise in terms of quantity, which is no longer able to meet the increasing needs (Warlin 2010). A house is said to be healthy if the house has the following facilities: adequate supply of clean water, a place for disposal of feces, disposal of waste water, a place for disposal of samaph (Notoatmodjo 2010). Household water must meet the following requirements: water that is clear, colorless, tasteless and odorless (physical requirements). Does not contain substances that are harmful to health such as toxic substances, and does not contain minerals and organic substances higher than the specified amount (chemical requirements). Water should not contain a germ. Diseases that are often transmitted by means of water are diseases that belong to the category of "*water-borne diseases*" (bacteriological terms). Household water is said to meet bacteriological requirements not to contain germs, not to contain *Escherichia coli* bacteria and saprophytic bacteria not more than 100/ml of water (Entjang, 2007). Direct disease transmission or also known as person-to-person transmission is the direct transfer of a pathogen or agent from a host/reservoir to a susceptible host. Direct transmission can occur through physical contact or direct person-to-person contact, such as touching contaminated hands, skin-to-skin contact, kissing or sexual intercourse (Timmreck 2010).

Indirect transmission occurs when a pathogen or agent is transferred or carried through several items, organisms, objects or intermediary processes to a susceptible host, causing disease. Indirect transmission is carried out through the following modes of transmission: *Airborne transmission* occurs when droplets or dust particles carry pathogens to the host and infect them. *Airborne* transmission occurs when pathogens are carried in drinking water, swimming pools, rivers or lakes used for swimming. *Vehicle-borne* transmission is related to *fomites* (goods/objects), for example cutlery, clothing, washing equipment, drinking water bottle combs (Timmreck 2010). Traditionally there are four classifications of water-related diseases, *water borne diseases* are diseases that are transmitted directly through drinking water, where the water you drink contains pathogenic germs that cause those concerned to become sick (cholera, typhus, dysentery). *Water washed diseases*, are diseases related to lack of water for personal *hygiene*. Diseases classified here (scabies, skin infections and mucous membranes, trachoma, leprosy). *Water-based diseases*, are diseases caused by germs that part of their life cycle are related to water (*Schistosomiasis*). *Water-related vectors*, diseases that are transmitted by disease vectors whose broodstock is partly or wholly in water, namely malaria, dengue fever, dengue, filariasis (Achmadi 2010).

Limitations of clean water make people lazy to bathe or rarely bathe, bathe in unsanitary conditions or shower soberly, so that the body becomes unclean and easily infested by skin diseases, one of which is scabies (Cakmoki 2012). The role of water as a carrier of infectious diseases, especially scabies, varies, water as a medium for pathogenic microbes to live, water as a nest for disease-spreading insects, the amount of water available is insufficient, the human concerned cannot clean himself. Water as a medium for living disease vectors. There are several diseases that fall into the category of *waterborne diseases*, or *waterborne* diseases which are common in many areas. These diseases can spread if the microbes that cause them get into the water sources that people use to meet their daily needs. While the types of microbes that spread through water include bacteria, protozoa and metazoan (Warlin 2010). Provision of clean water is the main key to bathroom sanitation which plays a role in the transmission of scabies, because scabies is included in *water washed diseases*. The availability of clean water that does not meet the requirements both in terms of quantity and quality will cause a person to be unable to clean himself optimally and effectively. This will affect the person's health condition in fulfilling personal hygiene which will have an impact on the emergence of scabies. In addition, water that does not meet health requirements when used by scabies sufferers will increase the risk of secondary infection due to bacteria in the water.

This secondary infection will later cause the healing process of scabies to take longer (Stikkas Dehasen, 2012).

Clean Water Requirements: Soekidjo (2011) so that clean water does not cause disease, the water should be endeavored to meet health requirements at least try to be close to these requirements. Healthy water must have the following requirements:

1. Physical requirements; The physical requirements for healthy drinking water are clear (colorless), tasteless, the temperature below the outside air temperature. How to know the water that meets these physical requirements is not difficult.
2. Bacteriological conditions; water for healthy drinking purposes must be free from all bacteria; particularly pathogenic bacteria. The way to find out whether drinking water is contaminated with pathogenic bacteria is to examine a sample (sample) of the water. And if from examining 100cc of water there are less than 4 E.coli bacteria, then the water meets health requirements.
3. Chemical terms; healthy drinking water must contain certain substances in certain amounts as well. Deficiency or excess of one of the chemical substances in water will cause physiological disturbances in humans.

Clean Water Sources

Sumantri (2011) in principle all water can be processed into drinking water.

- Rainwater; Rainwater can be collected and then used as drinking water. However, this rainwater does not contain calcium. Therefore, in order to be used as healthy drinking water, it is necessary to add calcium to it.
- River and lake water, according to its origin, is partly from river and lake water, also from rainwater flowing through canals into rivers or lakes. These two water sources are often also called surface water. Because river water and lake water have been contaminated or polluted by various kinds of impurities, if they are to be used as drinking water, they must be treated first.
- Water springs; the water that comes out of these springs usually comes from groundwater that appears naturally. Therefore, the water from these springs, if it has not been polluted by dirt, can be used as drinking water directly. However, because we are not sure whether it is true that it has not been polluted, it would be better if the water is boiled before drinking.
- Shallow well water is water that comes out of the ground, also called groundwater. The water comes from a shallow layer of water in the soil. The depth of this water layer from the ground surface from one place to another varies. Usually ranges from 5 to 15 meters from the ground.
- This deep well water comes from the second layer of water in the ground. The depth from the ground surface is usually above 15 meters. Therefore, most of the water from deep wells like this is healthy enough to be used as drinking water directly (without going through any processing).

Clean Room And Home Yard Routinely: Rooms in the house can cause various diseases if they are not routinely cleaned, household items such as pillows, bed sheets, mattresses have the potential to become a place for them to settle and can function as a medium for the attachment of bacteria or viruses that can interfere with human health. Rooms that are not clean and tidy can also invite flies, mosquitoes and rats to enter the room (Notoatmodjo 2011).

The Problem of Lack of Clean Water: Lack of clean water can cause a number of diseases that are dangerous to health, some even life-threatening. Several diseases caused by a lack of clean water, such as cholera and various other diarrhea-causing diseases, are estimated to cause around 1.8 million deaths worldwide each year. Because water is used for various daily needs, a lack of clean water can have various negative impacts on life, especially on health. Diseases related to the lack of availability of clean water are even

considered as one of the most significant health problems in the world, Suriawiria (2005) .

Adverse Effects Due to Lack of Clean Water

In a number of developing countries, the cumulative effect of a lack of clean water can have an impact on human resource development and economic growth. Many people, including children, have to spend time searching for and fetching water from very remote locations. This causes the energy and time that should be used for work and study to be used up to fetch water. The following are the adverse effects of a lack of clean water that can occur:

- Difficulty drinking water and cleaning food.
- Sanitation facilities are becoming inadequate due to a lack of clean water.
- Poor personal hygiene.

These conditions can trigger a variety of dangerous infectious diseases. This phenomenon traps people in a cycle of poverty and poor health.

Diseases Due to Lack of Clean Water: Lack of clean water is also a health crisis. There are five main infectious diseases caused by a lack of clean water, namely *water-borne*, *water-woahsed*, *water-based*, *water-related insect vectors* and *diseases caused by defective sanitation* .

Diseases that are transmitted through water (water-borne): This type of disease is transmitted through consumption of water that is contaminated with viruses or bacteria. Some types of water-bone disease are: Cholera, Typhoid , Dysentery , Gastroenteritis , Hepatitis Diseases caused by consumption of contaminated water usually cause diarrhea due to infection of the gastrointestinal tract (intestines) by parasites. In addition, diarrhea can also cause fever, cramps, nausea, dehydration and weight loss. This disease can even threaten the lives of people who have a weak body system, such as children, the elderly, or those who have a history of previous illnesses.

Disease due to lack of water to maintain personal hygiene (water-wased)

Types of diseases caused by a lack of clean water to maintain personal hygiene, including:

- Gastrointestinal infections such as shigella infection which causes dysentery
- Infectious skin diseases such as scabies, yaws, leprosy, skin infections and boils.
- Eye diseases such as trachoma and viral conjunctivitis.

These diseases can be transmitted by direct contact with the sufferer. For example, direct contact with an open wound with scabies or through the tear fluid of a patient with trachoma eye infection.

Disease from organisms that live in water (water-based).

Diseases caused by a lack of clean water can also be caused by organisms in the water, such as worms. Some of these diseases include:

- Schistosomiasis or disease caused by infection with trematode worm parasites.
- Dracunculiasis or Dracunculus medinensis (guinea worm) infection.

When there is a shortage of clean water, you may be forced to use dirty water for bathing. This condition allows worms to enter the skin and infect the body.

Diseases from insect vectors that breed in water (*water-related insect vectors*).

This disease is spread by insects that part or all of their breeding cycle occurs in or near stagnant water. Diseases caused by a lack of clean water include:

- Malaria is caused by parasites and spread by mosquito bites.
- Filariasis or elephantiasis is caused by filarial worms.
- Yellow fever is spread by mosquitoes infected with the virus.
- River *blindness* / Robls disease / Onchocerciasis caused by the worm *Onchocerca volvulus*.

Diseases due to poor sanitation: One of the diseases caused by poor sanitation due to lack of clean water is hookworm infection. A person can become infected with hookworms when walking barefoot and in direct contact with feces containing hookworm larvae. The larvae can enter the feet, then go to the small intestine and reproduce. The worm eggs then come out through the feces and the hookworm life cycle continues to repeat. Water is a very important substance for the life of all creatures on earth. About 71 percent of the earth contains water and our own bodies also contain about 80 percent water. Therefore, water is a very valuable item because water has very important uses for human life. Provision of clean water in settlements is an infrastructure to support the development of its inhabitants. Clean water in the settlements must be available properly in the sense that the quality meets the standards, the quantity is sufficient, is available continuously and the way to get it is easy and affordable, which makes the residents of the settlements comfortable living (Sastru M, 2005). According to Suriawiria (2005), that whether or not water quality meets the requirements for life, is determined by physical, chemical and bacteriological provisions and requirements. The provision of clean water of poor quality will also have a negative impact on health, so the quality of clean water must be controlled and guaranteed. Provision of clean water must be able to serve most/all of the community, so that people affected by water-related diseases can be reduced.

Clean Water Accessibility: Accessibility is the basic concept of the interaction or relationship of land use and transportation. Another definition of accessibility or level of coverage is the ease with which residents can bridge the distance between various activity centers. Where the level of accessibility is affected by distance, the condition of the transportation infrastructure, the availability of various means of connecting including the frequency, and the level of security and comfort for going through these routes (Jayadinata, 1992).

Personal Hygiene: According to Wartonah (2012), personal hygiene comes from the Greek language, namely personal which means individual and hygiene means healthy. Personal hygiene is an action to maintain a person's cleanliness and health for physical and psychological well-being. According to Perry (2010), personal hygiene is an action to maintain a person's cleanliness and health for physical and psychological well-being, lack of self-care is a condition in which a person is unable to perform hygiene care for himself.

Factors that influence *personalhygiene*: According to Wartonah (2003), *personal* influencing factors *Hygiene* is: Body image, social practice, socio-economic status, knowledge, culture, cleanliness of a person, physical or psychological condition.

The impact that often arises on Personal Hygiene problems

The impact that will arise if personal hygiene is lacking is (Wartonah, 2007)

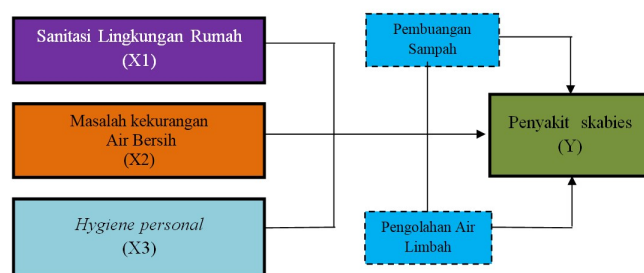
- Physical impacts, namely physical disturbances that occur due to health problems suffered by a person because personal hygiene is not maintained properly, are disturbances that often occur are disorders of skin integrity, disorders of the oral mucous membrane, infections of the eyes and tellinga and physical disorders of the nails.

- Psychosocial impacts, namely social problems related to personal hygiene are disturbances of the need for comfort, self-actualization and disturbance of social interaction.

Maintenance In *Personal Hygiene*: Maintenance of *personal hygiene* is necessary for individual comfort, safety and health (Perry, 2010) *personal hygiene* includes: Skin Hygiene , Hair Hygiene , Dental Hygiene , Ear Hygiene , Hand, Foot and Nail Hygiene , Just like skin, hands, feet and nails must be cared for and this cannot be separated from the cleanliness of the surrounding environment and daily living habits. Clean hands, feet and nails prevent us from various diseases. Dirty fingernails and hands can pose a danger of contamination and cause certain diseases. To avoid the danger of contamination, you must clean your hands before eating, cut your nails regularly, clean the environment, and wash your feet before going to bed.

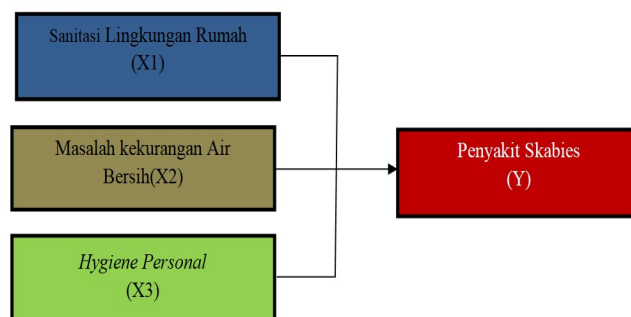
Theoretical framework: Ridduan (2010) theoretical framework is a model that explains how the relationship between theory and important factors that are known in a problem in theory is a collection of general propositions that are interrelated and used to explain the relationships that arise between several observed variables.

Descendants



Definitions of the Concept Framework: Notoatmodjo (2012) research concept framework is a description and visualization of the relationship or connection between one concept to another concept. So in this study the concepts developed by researchers are as follows:

Conceptual Framework



Research Hypothesis: According to Sudjana (1992), cited by Riduwan (2007) means that a hypothesis is an assumption or conjecture about something that is made to explain that matter for which there is no definite path.

Hypothesis 1

Ha: There is a relationship between sanitation in the home environment and the incidence of scabies in *the Sentru Saude ComunitarioMunicipio Dili*.

H0: There is no relationship between home environmental sanitation and the incidence of scabies at *Sentru Saude Comunitario Municipio Dili*.

Hypothesis 2

Ha: There is a relationship between the lack of clean water and the incidence of scabies in *the Sentru Saude ComunitarioMunicipio Dili*.

H0: There is no relationship between the lack of clean water and the incidence of scabies in *the Sentru Saude ComunitarioMunicipio Dili*.

Hypothesis 3

Ha: There is a personal relationship between *Hygiene* and the incidence of scabies at *the Sentru Saude Comunitario Municipio Dili*.

H0: There is no relationship between *personal hygiene* and the incidence of scabies at *Sentru Saude Comunitario Municipio Dili*.

RESEARCH METHODS

Research design: Susila, *et al.* (2014), this type of research is analytic observational research, with a *cross-sectional study approach* (cross-sectional study). This study assesses or measures independent variables (risk factors/determinants) and dependent variables (effects/events) that can be carried out simultaneously (simultaneously) at the same time . This type and design was chosen with the aim of analyzing the factors related to the incidence of scabies , namely sanitation in the home environment, the problem of lack of clean water, and *personal hygiene* which in this study are referred to as risk factors or as independent variables. and the incidence of scabies in all age groups as an effect or dependent variable, which will be studied simultaneously.

Population: The population in this study were all scabies patients who came for treatment *Sentru Saude ComunitarioMunicipio Dili* from January to December 2022 in three *Sentru Saude ComunitarioMunicipio Dili* as many as 412 scabies patients. This number consists of *Sentru SaudeComunitario Comoro* with 151 scabies patients, and *Sentru Saude Comunitario Becora* with 132 scabies patients , *Sentru SaudeComunitario Bairo Formosa* as many as 129 scabies patients.

Sample: Sastro Asmoro *etal.*(2008) in Susila, *at al* , (2014), the sample is a *subset* of the target population selected in a certain way so that it is considered representative of the population. Azwar (2001) in Susila, *et al* , (2014), a sample is a good representation of the population depending on the extent to which the characteristics of the sample are the same as the characteristics of the populationThe sample determined in this study were all patients aged over 17 years who had signs and symptoms of scabies taken based on determined criteria, technique and sample size. The criteria used to determine the sample consisted of two criteria, namely inclusion criteria and exclusion criteria.

Inclusion Criteria

- Respondents aged over 17 years
- Registered as indigenous people in the research area/location.
- Respondents who are willing to be interviewed.
- Respondents must live in the area/location of research

Exclusion Criteria

- Respondents did not suffer from scabies
- The respondent suddenly fell ill and entered the emergency room
- Respondents with mental disorders

- The sample size used in this study was determined using the formula from Taro Yamane quoted by Rakhmat (2013) as follows:

$$n = \frac{N}{1 + N \cdot (e)^2}$$

Information:

- n = Number of samples
- N = Total population
- e² = desired deviation rate 0.05 %

It is known that the population (community) is N = 412 people with scabies consisting of *Sentru SaudeCounitario Comoro* with 151 scabies patients, and *Sentru SaudeComunitario Becora* with 132 scabies patients, *Sentru SaudeComunitario Bairo Formosa* as many as 129 scabies patients. Thus the samples taken in this study according to the following formula:

Sampling process from *Sentru SaudecomunitarioComoros* as follows:

$$n = \frac{N}{1 + N \cdot (e)^2} = \frac{412}{1 + 412 \cdot (0,03)^2} = \frac{412}{1 + 412 \cdot 0,0009} = \frac{412}{1,3708} = 300 \text{ responden}$$

So the number of samples is 300 respondents but researchers can add 2.3% (7) to keep the respondents *from dropping out* so that the total number becomes 307 respondents.

Furthermore, the number of samples for each *Sentru SaudeThe communitarians* are as follows:

- *Sentru Saude ComunitarioComoros* = $\frac{151}{412} \times 300 = 110$ responden.
- *Sentru Saude Comunitario Becora* = $\frac{132}{412} \times 300 = 96$ responden.
- *Sentru Saude Comunitario Bairo Formosa* = $\frac{129}{412} \times 300 = 94 + 7 = 101$.

In particular, *Sentru Saude Kounitario Bairo Formosa*, researchers can add 2.3% (7) to keep respondents *from dropping out*. So the total of the three *Sentru Saude Komunitario Municipio Dili* is a total of 307 respondents.

Research Instruments: According to Notoatmodjo (2012) data research instruments are the tools used for data collection. This research instrument can be in the form of a questionnaire (list of questions)

Data Sources, the data sources used in this study are divided into two, namely primary data and secondary data

Primary data: Sources of data obtained directly from original sources (not through intermediaries) in this study primary data were obtained through research questionnaires which would be distributed to respondents namely Scabies disease patients.

Secondary Data: Sources of data obtained indirectly or through intermediaries or from data that is already available. In this study, the secondary data used by researchers were data that was already available and obtained directly from the health office or the Ministry of Health *Ministerio da Saude, Serbisu Saude Muinicipio, and Sentru Saude communitaria* located in *the municipio of Dili*

Data Type: According to Riduwan (2013), the types of data used in research can be divided into two, namely:

Qualitative data types: Data related to categorization and characteristics in the form of questions or in the form of words -. This data is usually obtained from interviews and is subjective because the

data is interpreted differently by different people. Qualitative data can be calculated in the form of ordinal or ranking.

Quantitative data type: Tangible data and numbers. These data are obtained from direct measurements as well as from numbers obtained by converting qualitative data into quantitative. Quantitative data are objective and can be interpreted equally by everyone.

Data collection technique: *Technique* used by researchers is manual collection, consisting of: Questionnaires, Observations, Interviews

Data Processing Techniques: In this research, the data processing stages used by researchers to produce correct information are Editing, Coding, Data Entry, and Tabulating.

Data Analysis Techniques: The technique used in analyzing the data in this study was the multiple correlation analysis technique using computer-assisted analysis using the SPSS version 22 program. The data was analyzed using the following steps.

Univariate analysis: Univariate analysis was carried out descriptively for each research result with a frequency distribution table accompanied by discussion (Notoatmodjo, 2002)

Bivariate Analysis: Bivariate analysis is used to analyze the relationship between the dependent variable and the Independent variable. Thus the technique used for chi-square analysis is to use the SPSS analysis application version 22. The following is the standard P value with the following results:

- If the P.Value value is > 0.05 , then the statistical test value is not significant between the dependent variable and the Independent variable
- If the P.Value value is < 0.05 , then the statistical test value is significant between the dependent variable and the Independent Variable

Research Ethics

According to Notoatmodjo (2011) in detail there are rights and obligations of researchers and those being studied (informants) are as follows:

- Respondent's rights and obligations
- the right to respect their privacy
- The right to keep confidential information confidential
- The right to obtain security guarantees or personal safety from information.
- The right to obtain security or safety guarantees as a result of the information provided.
- Rights and obligations of the researcher or interviewer: Maintaining the privacy of the respondent Maintaining the confidentiality of the respondent, Providing compensation.

RESULTS AND DISCUSSION

Overview of Research Locations: *Sentru Saude Becora, Sentru Saude Formosa and Sentru Saude Comoro* are part of *Serbisu Saude Municipio Dili* which is the territory of six 6 *sentru saude* in *Municipio Dili* serving 125,702 population in the city of Dili (2015 census) The following is an overview of the three *Sentru Saude* A The history of the establishment of the *Centru Saude Komunitaria Becora* dates back to the Indonesian era and served as a health service center for the community and until now it has become an institution for the Timor-Leste Ministry of Health and to provide optimal health services to the people in the area in the *Posto Administrativo Cristo - Rei Municipio Dili* and also the center of the *Saude Comunitaria Becora* is located on the territory of the *Suco Camea*.

Research result: Based on the calculation results above, it shows that of the 307 respondents who filled out the questionnaire, it can be seen

from the age of 17-24 that 55 people with a percentage of 49.5% had scabies, and 56 people with a percentage rate of 50.5% who did not suffer from scabies. Age 25-34 as many as 56 people with a percentage of 45.2% who suffer from scabies, and 68 people with a percentage rate of 54.8% who do not suffer from scabies. Age 35-44 as many as 25 people with a percentage of 52.1% who suffer from scabies, and 23 people with a percentage rate of 47.9% who do not suffer from scabies. Age 45-54 as many as 11 people with a percentage of 73.3%, who suffer from scabies and 4 people with a percentage rate of 26.7% who do not suffer from scabies. Age 55-64 as many as 3 people with a percentage of 42.9% who suffer from scabies and 4 people with a percentage rate of 57.1% who do not suffer from scabies. Age 65-71 as many as 1 person with a percentage of 50.0% who suffers from scabies and 1 person with a percentage rate of 50.0% who does not suffer from scabies. From the 307 respondents above, the most suffer from scabies, namely from the age of 25-34, there were 56 people with a percentage of 45.2% of all respondents.

Based on the results of the calculation above, it shows that of the 307 respondents who filled out the questionnaire, there were 81 women with a percentage of 46.8% who had scabies and 92 people with a percentage of 53.2% who did not suffer from scabies. While the male sex was 70 people with a percentage of 52.2% who suffered from scabies and 64 people with a percentage of 47.8% who did not suffer from scabies.

Thus it can be concluded that the female sex suffered more from scabies, namely 81 people with a percentage of 46.8% of men. Based on the calculation results above, it shows that of the 307 respondents who filled out the questionnaire, there were 80 single status people with a percentage rate of 49.7% who suffered from scabies and 81 people with a percentage of 50.3% who did not suffer from scabies. Meanwhile, the family status of 71 people with a percentage of 48.6% and 75 people with a percentage of 51.4% did not suffer from scabies. Thus it can be concluded that there are single statuses who suffer more from scabies as many as 80 people with a percentage of 48.6% of those who are married. Based on the calculation results above, it shows that of the 307 respondents who filled out the questionnaire did not attend school as many as 85 people with a percentage rate of 54.5% who suffered from scabies and 71 people with a percentage rate of 45.5% who did not suffer from scabies. Primary school education consisted of 23 people with a percentage rate of 47.9% who suffered from scabies and 25 people with a percentage rate of 52.1% who did not suffer from scabies. In junior high school education, there were 5 people with a percentage rate of 71.4% who suffered from scabies and 2 people with a percentage rate of 28.6% who did not suffer from scabies. High school education as many as 31 people with a percentage rate of 37.3% who suffer from scabies and 52 people with a percentage rate of 62.7% who do not suffer from scabies. Education DIII as many as 6 people with a percentage rate of 75.0% who suffer from scabies and 2 people with a percentage rate of 25.5% who do not suffer from scabies. Bachelor/S1 degree, 1 person with a percentage of 20.0% who suffers from scabies and 4 people with a percentage of 80.0% who do not suffer from scabies. Thus it can be concluded that those who suffer from scabies are mostly those who do not go to school, namely as many as 85 people with a percentage rate of 54.5%.

Primary data source *Sentru Saude municipal municipio Dili 2022:* Based on table 4.2.1.2 the cross between Home Environmental Sanitation, Lack of Clean Water, *Personal Hygiene* on the incidence of scabies shows the results of the *Chi-Square test analysis* that Respondents who had good sanitation conditions at home and had scabies were 74 people with a percentage rate (67.9%), while respondents who had good sanitary conditions at home and no scabies were 35 people with a percentage rate of 32.1%. Meanwhile, there were 77 respondents who had poor sanitation conditions in their home environment and scabies with a percentage rate of 67.9%, and 121 respondents who had poor sanitation conditions in their home environment and no scabies disease with a percentage rate of 61.1%. And the OR = 3.322, P.Value = 0.000, CI = 2.029 – 5.441.

Results of analysis of characteristics of the three *Centru Saude Comunitario Municipio Dili*

Indicator	Scabies Disease Incidence		Total N (%)	P. Value
	Yes N (%)	No N (%)		
By age group				0.469
➤ 17-24	55 (49.5%)	56 (50.5%)	111 (100.0%)	
➤ 25 – 34	56 (45.2%)	68 (54.8%)	124 (100.0%)	
➤ 35 – 44	25 (52.1%)	23 (47.9%)	48 (100.0%)	
➤ 45 – 54	11 (73.3%)	4 (26.7%)	15 (100.0%)	
➤ 55 – 64	3 (42.9%)	4 (57.1%)	7 (100.0%)	
➤ 65 – 71	1 (50.0%)	1 (50.0%)	2 (100.0%)	
Amount	151 (49.2%)	156 (50.8%)	307 (100.0%)	
Based on Gender				0.346
➤ Woman	81 (46.8%)	92 (53.2%)	173 (100.0%)	
➤ Man	70 (52.2%)	64 (47.8%)	134 (100.0%)	
Amount	151 (49.2%)	156 (50.8%)	307 (100.0%)	
By Status				0.853
➤ Bachelor	80 (49.7%)	81 (50.3%)	161 (100.0%)	
➤ family	71 (48.6%)	75 (51.4%)	146 (100.0%)	
Amount	151 (49.2%)	156 (50.8%)	307 (100.0%)	
Level of education				0.040
➤ No school	85 (54.5%)	71 (45.5%)	156 (100.0%)	
➤ SD	23 (47.9%)	25 (52.1%)	48 (100.0%)	
➤ JUNIOR HIGH SCHOOL	5 (71.4%)	2 (28.6%)	7 (100.0%)	
➤ SENIOR HIGH SCHOOL	31 (37.3%)	52 (62.7%)	83 (100.0%)	
➤ DIII	6 (75.0%)	2 (25.5%)	8 (100.0%)	
➤ Bachelor degree	1 (20.0%)	4 (80.0%)	5 (100.0%)	
Amount	151 (49.2%)	156 (50.8%)	307 (100.0%)	
By Profession				0.578
➤ Government employees	54 (50.9%)	52 (49.1%)	106 (100.0%)	
➤ Private	32 (43.8%)	41 (56.2%)	73 (100.0%)	
➤ Student	65 (50.8%)	63 (49.2%)	128 (100.0%)	
Amount	151 (49.2%)	156 (50.8%)	307 (100.0%)	

Results of Cross Analysis between Home Environment Sanitation, Lack of Clean Water and Personal Hygiene on the Incidence of Scabies Disease in the Three *Sentru Saude Komunitario Municipio Dili*

Research variable	Incidence of Scabies		Total N (%)	OR	95% CI		P. Value
	Yes N (%)	No N (%)			Lower	super	
Home Environment Sanitation (X1)				3,322	2029	5,441	0.000
➤ Yes	74 (67.9%)	35 (32.1%)	109 (100.0%)				
➤ No	77 (38.9%)	121 (61.1%)	198 (100.0%)				
Amount	151 (49.2%)	156 (50.8%)	307 (100.0%)				
Lack of Clean Water (X2)				2,656	1,578	4,469	0.000
➤ Yes	57 (66.3%)	29 (33.7%)	86 (100.0%)				
➤ No	94 (42.5%)	127 (57.5%)	221 (100.0%)				
Amount	151 (49.2%)	156 (50.8%)	307 (100.0%)				
Personal Hygiene (X3)				1924	1,181	3,134	0.000
➤ Yes	59 (60.2%)	39 (39.8%)	98 (100.0%)				
➤ No	92 (44.0%)	117 (56.0%)	209 (100.0%)				
Amount	151 (49.2%)	156 (50.8%)	307 (100.0%)				

Thus OR = 3.322 means that poor sanitation of the home environment is a threefold risk factor for the occurrence of scabies, and P.Value = 0.000 or 0.05% means that sanitation of the home environment for the incidence of scabies is very significant in the *Centru Saude Comunitario Municipio Dili* in 2022. Based on table 4.2.1.2 the cross between Home Environmental Sanitation, Lack of Clean Water, *Personal Hygiene* on the incidence of scabies shows the results of the *Chi-Square test analysis* that Respondents who had a good condition of shortage of clean water and had scabies were 57 people with a percentage rate (66.3%), while respondents who had a good condition of lack of clean water and no scabies were 29 people with a percentage rate of 33.7%. Meanwhile, there were 94 respondents who had a bad condition of lack of clean water and had scabies with a percentage rate of 42.5%, and 127 of them had a bad condition of lack of clean water and no scabies with a percentage rate of 57.5%. And the result is OR = 2.656, P.Value = 0.000, CI = 1.578 – 4.469. Thus OR = 2.656 means that a lack of clean water is a double risk factor for the occurrence of scabies, and P.Value = 0.000 or 0.05% means that the lack of clean water is very significant for the incidence of scabies in the *Centru Saude Comunitario Municipio Dili* in 2022. Based on table 4.2.1.2 the cross between Home Environmental Sanitation, Lack

of Clean Water, *Personal Hygiene* on the incidence of scabies shows the results of the *Chi-Square test analysis* that Respondents who had good *Personal Hygiene* and had scabies were 59 people with a percentage rate (62.2%), while respondents who had good *Personal Hygiene conditions* and no scabies were 39 people with a percentage rate of 39.8%. Meanwhile, there were 92 respondents who had poor *Personal Hygiene and had scabies with a percentage rate of 44.0%*, and 117 respondents who had poor *Personal Hygiene and no Scabies disease with a percentage rate of 56.0%*. And the result is OR = 1.924, P.Value = 0.000, CI = 1.181 – 3.134. Thus OR = 1.924 means that poor *Personal Hygiene is a risk factor for scabies*, and P.Value = 0.000 or 0.05% means *Personal Hygiene* for the incidence of scabies is very significant at the *Centru Saude Comunitario Municipio Dili* in 2022.

DISCUSSION

Discussion of Research Results

Relationship of Sanitation of the home environment to EventsDiseaseScabies at *Sentru Saude Komunitario Municipio Dili* year 2022: Based on the cross table above between Home

Environment Sanitation, Lack of Clean Water, *Personal Hygiene* on the incidence of scabies shows the results of the *Chi-Square test analysis* that Respondents who had good sanitation conditions at home and had scabies were 74 people with a percentage rate (67.9%), while respondents who had good sanitary conditions at home and no scabies were 35 people with a percentage rate of 32.1%. Meanwhile, there were 77 respondents who had poor sanitation conditions in their home environment and scabies with a percentage rate of 67.9%, and 121 respondents who had poor sanitation conditions in their home environment and no scabies disease with a percentage rate of 61.1%. And the OR = 3.322, P.Value = 0.000, CI = 2.029 – 5.441. Thus OR = 3.322 means that poor sanitation of the home environment is a threefold risk factor for the occurrence of scabies, and P.Value = 0.000 or 0.05% means that sanitation of the home environment for the incidence of scabies is very significant at the Centru Saude Comunitario Municipio Dili in 2022 .

Connection Lack of clean water, to the incident Scabies Disease in the Sentru Saude Municipal Municipio in 2022: Based on the cross table above between Home Environment Sanitation, Lack of Clean Water, *Personal Hygiene* on the incidence of scabies shows the results of the *Chi-Square test analysis* that Respondents who had a good condition of shortage of clean water and had scabies were 57 people with a percentage rate (66.3%), while respondents who had a good condition of lack of clean water and no scabies were 29 people with a percentage rate of 33.7%. Meanwhile, there were 94 respondents who had a bad condition of lack of clean water and had scabies with a percentage rate of 42.5%, and 127 of them had a bad condition of lack of clean water and no scabies with a percentage rate of 57.5%. And the result is OR = 2.656, P.Value = 0.000, CI = 1.578 – 4.469. Thus OR = 2.656 means that a lack of clean water is a double risk factor for the occurrence of scabies, and P.Value = 0.000 or 0.05% means that the lack of clean water is very significant for the incidence of scabies in the Centru Saude Comunitario Municipio Dili in 2022.

The Relationship between Personal Hygiene and the Incidence of Scabies in Sentru Saude Comunitario Municipio Dili in 2022: Based on the cross table above between Home Environment Sanitation, Lack of Clean Water, *Personal Hygiene* on the incidence of scabies shows the results of the *Chi-Square test analysis* that Respondents who had good *Personal Hygiene* and had scabies were 59 people with a percentage rate (62.2%), while respondents who had good *Personal Hygiene conditions* and no scabies were 39 people with a percentage rate of 39.8%. Meanwhile, there were 92 respondents who had poor *Personal Hygiene and had scabies with a percentage rate of 44.0%*, and 117 respondents who had poor *Personal Hygiene and no Scabies disease with a percentage rate of 56.0%*. And the result is OR = 1.924, P.Value = 0.000, CI = 1.181 – 3.134. Thus OR = 1.924 means that poor *Personal Hygiene is a risk factor for scabies, and P.Value = 0.000 or 0.05% means Personal Hygiene for the incidence of scabies is very significant at the Centru Saude Comunitario Municipio Dili in 2022.*

ENCLOSED

CONCLUSION

Based on the results of the research on the three saude centers above, it can be concluded as follows:

Results of Analysis on Home Environment Sanitation Variavel: *Sentru Saude Komunitario Municipio Dili* In the variable House environmental sanitation, the results obtained were OR = 3.322, P.Value = 0.000, CI = 2.029 – 5.441. Thus OR = 3.322 means that poor sanitation of the home environment is a threefold risk factor for the occurrence of scabies, and P.Value = 0.000 or 0.05% means that sanitation of the home environment for the incidence of scabies is very significant at the Centru Saude Comunitario Municipio Dili in 2022 .

Analysis Results for Variavel Lack of Clean Water: *Sentru Saude Comunitario Municipio Dili* for the clean water shortage variable, the results obtained were OR = 2.656, P.Value = 0.000, CI = 1.578 – 4.469. Thus OR = 2.656 means that a lack of clean water is a double risk factor for the occurrence of scabies, and P.Value = 0.000 or 0.05% means that the lack of clean water is very significant for the incidence of scabies in the Centru Saude Comunitario Municipio Dili in 2022 .

Analysis Results for Variavel Personal Hygiene: *Sentru Saude Komunitario Municipio Dili* In the *Personal Hygiene variable, the results* obtained were OR = 1,924, P.Value = 0,000, CI = 1,181 – 3,134. Thus OR = 1.924 means that poor *Personal Hygiene is a risk factor for scabies, and P.Value = 0.000 or 0.05% means Personal Hygiene for the incidence of scabies is very significant at the Centru Saude Comunitario Municipio Dili in 2022.*

Suggestion

For Researchers: The results of this study are expected to add insight regarding clean and healthy living behaviors about Scabies . As reference material and information that is very useful and used as a guideline to be developed in writing papers in the future.

For Society: As input for the community so they can avoid scabies through improving environmental sanitation, using clean water and good personal hygiene to prevent the spread of scabies.

For the Centro da Saude Dili Municipio Comunitario: As input for *Centro da Saude* and experts to suggest providing an explanation for the community about the importance of living clean and healthy in a family and improving sanitation in the home environment to prevent the spread of scabies

For Government: The results of this study can be used as a reference and information material for the government in creating clean and healthy housing environmental sanitation conditions for the community in general.

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