Jurnal Multidisipliner BHARASA
Vol. 1 No. 2 (2022) pp. 71-132

RISK OF HELMINTHIASIS IN PREGNANT WOMEN

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Abstract:

The helminthic disease is transmitted through the soil that causes the human body to become infected with worms. Worms can lead to a deterioration in the state of health, nutrition, intelligence, and productivity of the infected individual. This study aims to discover how worms affect pregnant women's condition of the child to be born or the baby. This research uses a normative or literature approach, with the primary data source as documents related to the research subject. Data analysis was carried out descriptively. The results showed that worms in pregnant women affect the condition of the child to be born or the baby, such as the risk of prematurity, low birth weight, and the risk of perinatal death because helminth infections can cause anemia due to the body losing iron deposits which will eventually interfere with the formation of hemoglobin which is due to a decrease in food intake and malabsorption of nutrients.

Keywords: *Risk, cacingan, pregnant women*

Abstrak:

Penyakit cacing adalah penyakit menular yang ditularkan melalui tanah yang menyebabkan tubuh manusia terinfeksi cacing. Cacing dapat menyebabkan penurunan kondisi kesehatan, nutrisi, kecerdasan, dan produktivitas individu yang terinfeksi. Penelitian ini bertujuan untuk mengetahui bagaimana pengaruh cacing terhadap ibu hamil terhadap kondisi anak yang akan dilahirkan atau bayinya. Penelitian ini menggunakan pendekatan normatif atau literatur, dengan sumber data utama berupa dokumen yang berkaitan dengan subjek penelitian. Analisis data dilakukan secara deskriptif. Hasil penelitian menunjukkan bahwa cacing pada ibu hamil mempengaruhi kondisi anak yang akan dilahirkan atau bayinya, seperti risiko *prematuritas*, berat badan lahir rendah, dan risiko kematian perinatal, karena infeksi cacing dapat menyebabkan anemia akibat tubuh kehilangan timbunan zat besi yang pada akhirnya akan mengganggu pembentukan hemoglobin yang disebabkan oleh penurunan asupan makanan dan malabsorpsi nutrisi.

Kata kunci: Risiko, cacingan, wanita hamil

INTRODUCTION

Indonesia, A tropical country with high humidity, make worms grow fast (P. S. Sari, Triani, Suryani, & Lestari, 2020). Pinworms, plus worms and tapeworms, are common types of worms. This health disorder in the medical world is known as Ascariasis. Worms are one of the diseases that can interfere with growth because the intake of nutrients from food cannot be adequately absorbed. Helminthic diseases usually affect children. The disease is derived from parasitic infections in the form of worms. As a result, a child who experiences worms will experience disturbances in growth and can even cause anemia (Wahyuni & Kurniawati, 2019).

Worms are common diseases that have spread widely in Indonesia, ranging in rural and urban areas. It occurs in not only children but also adults. Usually, worms arise caused by the habit of not implementing a clean and healthy life. Clean living starts with oneself and the living environment. A person who implements a clean life will pay attention to his cleanliness and ensure that his residence is clean to avoid germs, bacteria, parasites, and other viruses. Meanwhile, healthy living habits can be seen in his habit of maintaining a diet or nutritional intake in daily life. WHO (Word Health Organization) analyzed that more than one billion of the world's population is affected by deworming or Ascaris (Mardiati, Maulina, & Sayuti, 2020).

WHO revealed the initial diagnosis of worms would experience diarrhea, vomiting, nausea, and abdominal pain. They were followed by other symptoms, with a decrease in appetite accompanied by shrinking weight. The initial stage of diagnosing a person with deworming or not, from the patient's description, and doing a physical check. The next stage is to take a sample of worms through the resulting phases. A sample of the faces is needed to examine the eggs of the worms. Different types of worms differ in the methods used. For example, people with hookworms. Hookworms infect the body through food and drink contaminated with helminth eggs and can enter through the skin in direct contact with soil contaminated with helminth eggs. To find out whether someone is suffering from hookworm disease by checking the blood, is there an increase in white blood cells and anemia or not? Because Hookworms get food by sucking blood in the body. As a result, a person will lose a lot of blood or anemia. Worms usually affect villagers more than in urban areas. Poor environmental sanitation factors are the main

culprits. In addition, other factors are lack of knowledge, good understanding, and low economy (Rahma, Zanaria, Nurjannah, Husna, & Putra, 2020).

The activities of rural communities are synonymous with agriculture, and livestock has a high prevalence of exposure to helminthic diseases. Agriculture and salting the smell of soil and animal feces are two places that are favorite places for worms to breed. It will quickly move and enter the body if it is not balanced by maintaining personal hygiene after farming activities and raising worms. The lack of knowledge of the villagers who do defecation not in the toilet still exists. So that it can cause soil pollution and reduce the availability of clean water, helminthic diseases should not be underestimated. Even if they are not deadly, they will slowly eat away at health. So that it can cause losses to health, followed by increasingly low productivity, thinking power, and economy (Kamil, 2019).

Education from an early age has been pursued. Children starting at the preschool level have begun to be taught hygienic behavior, how to wash their hands properly, maintain cleanliness and cut nails (Djuma et al., 2020). According to WHO, there are seven steps to wash your hands properly. Namely; 1) Moisten both hands with water evenly, take the soap, and gently rub both hands. 2) Rub the backs of both hands. 3) Rub between the fingers. 4) Clean the thumb by holding both hands together. 5) Rub and twist the thumb alternately. 6) Place the five fingertips on the hand, then rub it. 7) Rotate the wrists alternately. Then rinse and dry using a towel or tissue. The role of parents is vital in getting used to a clean and healthy life from an early age. Excellent and effective education should be by example to children. Because in childhood, they will easily model behavior instead of carrying out orders. So parents are tutors and implementers of the habit of regularly and correctly washing hands.

The danger of worms does not only occur in children and adults but also lurks in pregnant women. Worms experienced by pregnant women will usually cause the conceived child to experience low weight and productivity intelligence to fall (Rini Wahyu Ningsi, AR Pratiwi Hasanuddin, 2021). A baby infected with worms in the womb is at risk of having intellectual weakness; the child is prone to decreased disease transmission in the womb, impaired child growth and development, weak immune system, nervousness, and death. Helminth infections in pregnant women are usually

through drinking water contaminated with helminth eggs, lack of hygiene, eating unhygienic fruits and vegetables, and an unclean environment.

In addition, the impact of worms on pregnant women can cause miscarriages, the death of babies in the womb and newborns, and cause premature babies. Worms can absorb nutrients and blood for the body. As a result, the body is weak, lethargic, and quickly tired (N. P. Sari & Hayati, 2020). Be vigilant by expanding knowledge. Recognize the types, symptoms, and ways of spreading worms during pregnancy. Roundworms and hookworms are on the ground—transmitting through direct soil interaction. Helminth eggs enter the body through eating or drinking, dirty hands, skin that is in direct contact with soil contaminated with helminth eggs, or a dirty living environment. A person whose skin is contaminated with hookworm will experience itching and rashes. Pinworms will enter the intestines and spawn their tell in the anus. Symptoms of pinworms experience itching in the anus. At the same time, the type of worms that are often found in food is tapeworms. It is usually present in fleshy food such as dogs and pigs.

Based on the description above, this study aims to find out how deworming in pregnant women can affect the condition of the child being born or baby.

METHODS

Research is a type of normative or literature research. Data collection through literature review is related to the focus of research in the form of literature review, theory, and documents. The sources of primary materials in this study are various literature and regulations that directly discuss madrasas. The research framework of thought can be described as follows:

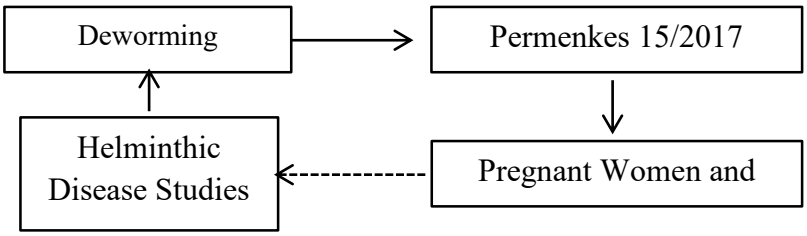

Figure. Research Framework of Thought

This research starts from a series of new habits of society that lead to awareness of healthy living, one of which is the re-emergence of awareness of helminthic diseases.

Permenkes Number 15 of 2017 is a regulation that functions to educate and anticipate helminthic diseases at the national level. Further explanation is needed regarding this health regulation, in line with the understanding of helminthic diseases and their effects. Triangulation data analysis is used in collecting data, reducing data, and presenting and drawing conclusions.

RESULTS AND DISCUSSION

Worms can cause severe infections that make the body experience symptoms of anemia so that it will be quickly tired and lethargic. Nutritional intake should be absorbed by the body but is tapped by worms in the stomach. If it lasts for a long time, it will interfere with daily activities and cause productivity to decrease. Revenue will also decrease. So deworming is a disease that can affect anyone, regardless of age. Whether a toddler, adult, or elderly, worms can interfere with bodily metabolic processes ranging from intake and digestion to absorption (Pratiwi & Sofiana, 2019).

Metabolic processes are stages of converting food and beverages into energy. Energy is needed by the body to carry out daily life activities. Humans cannot think, regenerate damaged cells, digest food, breathe, and drain blood without energy. Worms enter the body through contaminated eating or drinking; worm eggs enter the intestines and hatch. Hatched worms can spread widely to bodily organs such as bile and lungs. This can cause the absorption of food juices to be not optimal. Worms absorb the nutrients that the body should have obtained. Finally, the metabolic process does not run optimally. The impact of the body being dewormed continuously in the first thousand days of the child will be stunted where the condition of the body fails to get nutrients that will inhibit its growth and development. Toddlers affected by stunting have long-term effects, both from adolescence, adulthood, and the elderly. Another symptom of worms is lowering the appetite so that the weight will continue to decrease. Worms are an emergency disease often overlooked because they appear without clinical symptoms (Annida, Fakhrizal, Juhairiyah, & Hairani, 2019).

However, we can realize it early by paying attention to daily health. For example, if appetite is lost and weight continues to decrease, immediately take preventive measures by taking deworming drugs for six months, drinking more water, and consuming nutritious foods full of protein. To treat, take deworming for three days or check with the

doctor directly. Worms should not be taken lightly because the risk of children experiencing worms can be chronic and cause transmission in others. Toddlers or so-called babies under the age of five are vulnerable to worms. Toddlers have a high level of self-exploration, so they do not maintain cleanliness. As a result, worms easily enter the body (Elba, 2021).

Toddlers will experience physical development (height and weight), intelligence, motor function, language skills, and social and emotional. The process of interacting with the environment will cause high curiosity. That's the process of toddlers learning to gain new knowledge and experience. But this becomes a boomerang if parents ignore the little guy's behavior. The development of toddlers can be seen in their behavior. They start from him responding when invited to play, showing something, talking, starting to crawl, sitting, standing, and doing new things. Toddlers are infected with worms, usually when playing on the ground or below, by putting something seen in their mouth. Soil feces are accidentally contaminated with worm eggs, then enter the body. Or it could be from the habit of babies who like to squeeze their fingers into their mouths. Apart from soil contaminated with worms, it can also enter the body through vegetables and fruits that are not washed before eating (Puteri P, Nuryanto, & Candra, 2019).

The age of elementary school children is between 7-14 years. Such as toddlers who have a high level of curiosity, plus elementary-aged children have more active and social activities that are high. His activities that he enjoyed playing with peers make him forget about personal hygiene. Play activities Children of primary age cannot be avoided from the ground (Hartati, Imbiri, & Kawaitou, 2021). The spread of worms through the soil is caused by soil pollution, so worms quickly multiply. The process of transmigration of worms to the body through dirty hands and nails at the time of taking food, children are reluctant to wash their hands first. So that the worms enter the body along with the food. The behavior of children who like to snack carelessly and rarely bathe is a factor that is no less strong; elementary school children are prone to worms. Persistent deworming can lead to a decrease in congenital function and child achievement (Syifa, 2021). A child who has to deworm will have difficulty concentrating and low memory. So it won't be easy to learn because you don't have the spirit. Chronic malnutrition caused by worms will be stunted. Stunting is a situation where a child has a petite body, unlike a child whose age and intelligence are below average.

The government has tried to prevent deworming by socializing proper sanitation, monitoring worms, controlling risk factors, and handling sufferers. They start from socialization to increase public knowledge about dangers, transmission, and how to prevent them. Surveys were also conducted to reduce the number of presentations of helminthiasis, balanced by controlling risk factors by maintaining individual and environmental hygiene. A simple example of preventing deworming is to get used to cutting nails, washing hands before and after eating, washing hands after doing activities to touch dirty items, washing hands before and after defecation, using clean water, and not snacking carelessly (Ganda Sigalingging, Selli Dosriani Sitopu, 2019). So that deworming does not spread widely, it is necessary to have cooperation between the government and the community. Meanwhile, a particular government program for pregnant women, to prevent anemia due to helminth infections and increase the body's iron, is given 90 iron tablets during pregnancy (Dinkes, 2019).

Pregnant women must be more protective of sanitary hygiene behaviors or PHBS (Clean and Healthy Living Behaviors) (Taisir et al., 2019). For health and safety, the child's mother can be realized. Hygiene behavior is an effort to maintain self-hygiene for the common good of the baby. Start taking a diligent bath so that the body is clean, washing hands before eating so that the food that enters the body is clean, trimming nails to avoid bacteria and diseases, cleaning the house for mutual comfort, and washing dishes to maintain the cleanliness of dishes, eating the best food for the health of the mother and child they contain. Meanwhile, what is associated with sanitation is an effort to maintain and ensure that the food to be eaten is far from danger—from obtaining, processing, and storing to eating. In addition to paying attention to nutritional intake, pregnant women must also sanitize food so that what is eaten is healthy and safe for consumption. Healthy mothers, strong children. Because strong children will become the next great generation of the nation, productive in work, and can have high competitiveness (Sidabutar, 2020).

Anemia is one of the diseases that helminth infections can cause. Pregnant women are prone to anemia (Triharini, 2019) because the need for nutrients increases with the age of the pregnancy. Anemia of a state in which red blood cells or blood hemoglobin are low. Red blood cells are a supplier of oxygen to the tissues of the mother and child during pregnancy. The body will produce more red blood for maternal health and fetal development.

For this reason, the body needs a lot of nutritional intake or other nutrients to avoid worms. Support from the environment, especially the family, is indispensable for a clean and healthy life during pregnancy. The family plays a vital role in creating a clean and healthy environment to live in during pregnancy. Anemia can affect 1000 HPK (First Day of Life). 1000 HPK is a golden age in children's growth and development. Mothers must pay attention to their eating intake during breastfeeding because the child will get nutrients from breast milk (Nurdian, 2019).

To realize national health, a strategic plan is needed. Strategic plans determine strategies for achieving goals, objectives, and programs (Dinkes, 2019). One of the programs used by the government in preventing helminth infections in pregnant women is the Maternal and Child Health program, or MCH. MCH itself is a priority program in Indonesia to ensure healthy mothers and children (Lestari, 2019). Both during pregnancy and childbirth until monitoring the child's growth and development through immunization programs and others. In addition, the MCH program serves mothers, postpartum mothers, Family Planning (KB), newborns accompanied by complications, babies, toddlers and preschoolers and others. The purpose of the MCH program is to reduce the mortality rate that occurs in mothers (MMR) and the Infant Mortality Rate (AKB). With the MCH program, pregnant women can find out, control and prepare their health to undergo the maternity process. Healthy mothers become pioneers giving birth to healthy, strong and perceptive children.

CONCLUSION

Worms in pregnant women affect the condition of the child to be born or the baby to the risk of perinatal death in the baby because helminth infections can cause anemia due to the body losing iron deposits which will eventually interfere with the formation of hemoglobin caused by a decrease in food intake and malabsorption of nutrients. This can hurt the health of pregnant women and also the fetus; that is, there can be miscarriages in the fetus, disturbances during childbirth such as premature birth, uterine inertia or prolonged childbirth, old partus or also called undeveloped partus, uterine atony or unable to contract again, shock, *afibrinogenemia* or blood clotting disorders in infants, intrapartum infections or also called chorioamnionitis, and can also occur disorders during puerperium and heart failure. Anemia experienced by pregnant women will also

cause negative impacts on the baby, such as the risk of *prematurity*, low birth weight, and an increased risk of perinatal death.

REFERENCES

Annida, A., Fakhrizal, D., Juhairiyah, J., & Hairani, B. (2019). Gambaran status gizi dan faktor risiko kecacingan pada anak cacingan di masyarakat Dayak Meratus, Kecamatan Loksado, Kabupaten Hulu Sungai Selatan. *Journal of Health Epidemiology and Communicable Diseases*, *4*(2), 54–64. https://doi.org/10.22435/jhecds.v4i2.218

Dinkes, P. J. (2019). Renstra Dinas Kesehatan Jawa Tengah Tahun 2018-2023. In *Dinas Kesehatan Provinsi Jawa Tengah*.

Djuma, A. W., Susilawati, N. M., Djami, S. W., Rantesalu, A., Agni, N., Rohi Bire, W. L. ., … Bessie, M. F. (2020). Siswa Sd Bebas Kecacingan Di Sd Inpres Besmarak Dan Sd Gmit Biupu. *Jurnal Pengabdian Masyarakat Sasambo*, *2*(1), 114. https://doi.org/10.32807/jpms.v2i1.599

Elba, F. (2021). Faktor Kejadian Cacingan Pada Balita Stunting Di Kecamatan Pamulihan Kabupaten Sumedang. *Jurnal Sehat Masada*, *XV*(1), 65–73.

Ganda Sigalingging, Selli Dosriani Sitopu, D. W. D. (2019). Pengetahuan Tentang Cacingan Dan Upaya Pencegahan Kecacingan. *Jurnal Darma Agung Husada*, *6*(2), 96–104.

Hartati, R., Imbiri, M. J., & Kawaitou, L. (2021). Upaya Pencegahan Dan Penanggulangan Infeksi Kecacingan Anak Sekolah Dasar Di Kampung Tablasupa Distrik Depapre Kabupaten Jayapura (Efforts To Prevent and Control Worm Infection in Primary School Children in Tablasupa Village, Depapre District, Jayapura). *Jurnal Abdikemas*, *3*(2), 150–156. Retrieved from https://doi.org/10.36086/j.abdikemas.v3i1

Kamil, R. (2019). Studi Deskriptif Tingkat Pengetahuan Ibu Tentang Ascariasis (Cacingan) Pada Balita Di Wilayah Kerja Puskesmas Siwuluh Kabupaten Brebes Tahun 2019. *Jurnal Ilmu Kesehatan Bhakti Husada: Health Sciences Journal*, *10*(2), 115–121. https://doi.org/10.34305/jikbh.v10i2.101

Lestari, T. R. P. (2019). Pencapaian Status Kesehatan Ibu Dan Bayi Sebagai Salah Satu Perwujudan Keberhasilan Program Kesehatan Ibu Dan Anak. *Kajian*, *25*(1), 75–89. Retrieved from https://jurnal.dpr.go.id/index.php/kajian/article/download/1889/897

Mardiati, M., Maulina, F., & Sayuti, M. (2020). Hubungan Interpretasi Who (World Health Organization) Antropometri Z-Score Dan Infeksi Kecacingan Pada Anak Usia 36 – 60 Bulan Di Kota Lhokseumawe. *AVERROUS: Jurnal Kedokteran Dan Kesehatan Malikussaleh*, *6*(2), 44. https://doi.org/10.29103/averrous.v6i2.3325

Nurdian, A. N. F. dan Y. (2019). *Pemberian Praziquntel dan Suplemen Fe pada Ibu Hamil Sebagai Upaya Memperbaiki Tumbuh Kembang Anak pada 1000 HPK*. (June).

Pratiwi, E. E., & Sofiana, L. (2019). Kecacingan sebagai Faktor Risiko Kejadian Anemia pada Anak. *Jurnal Kesehatan Masyarakat Indonesia*, *14*(2), 1. https://doi.org/10.26714/jkmi.14.2.2019.1-6

Puteri P, P., Nuryanto, N., & Candra, A. (2019). Hubungan Kejadian Kecacingan Terhadap Anemia Dan Kemampuan Kognitif Pada Anak Sekolah Dasar Di Kelurahan Bandarharjo, Semarang. *Journal of Nutrition College*, *8*(2), 101.

https://doi.org/10.14710/jnc.v8i2.23821

Rahma, N. A., Zanaria, T. M., Nurjannah, N., Husna, F., & Putra, T. R. I. (2020). Faktor Risiko Terjadinya Kecacingan pada Anak Usia Sekolah Dasar. *Jurnal Kesehatan Masyarakat Indonesia*, *15*(2), 29. https://doi.org/10.26714/jkmi.15.2.2020.29-33

Rini Wahyu Ningsi, AR Pratiwi Hasanuddin, R. (2021). Identifikasi Infeksi Kecacingan Pada Ibu Hamil Di Wilayah Kerja Puskesmas Bonto Bangun. *Jurusan Analis Kesehatan*, *2*(1), 12–17.

Sari, N. P., & Hayati, Z. (2020). Kebersihan Perorangan dan Kecacingan pada Siswa SDN 128 Pekanbaru. *Jurnal Ilmiah Kesehatan Masyarakat : Media Komunikasi Komunitas Kesehatan Masyarakat*, *12*(4), 176–182. https://doi.org/10.52022/jikm.v12i4.99

Sari, P. S., Triani, E., Suryani, D., & Lestari, R. V. (2020). Pemeriksaan Status Gizi dan Kecacingan di Wilayah SDN 2 Malaka Lombok Utara. *Jurnal Pengabdian Magister Pendidikan IPA*, *2*(2). https://doi.org/10.29303/jpmpi.v2i2.377

Sidabutar, S. (2020). Higiene Sanitasi dan Kejadian Infeksi Kecacingan pada Siswa Sekolah Dasar Sondang. *Jurnal Penelitian Kesehatan Suara Forikes*, *11*(3), 64–67.

Syifa, N. A. (2021). Tingkat Praveleansi Kecacingan pada Siswa Sekolah Dasar di Beberapa Daerah Indonesia. *Jurnal Penelitian Perawat Profesional*, *3*(2), 383–390. https://doi.org/10.37287/jppp.v3i2.399

Taisir, A., Hapsari, R., Pratama, I. S., Aini, S. R., Tresnani, G., & Suryadi, B. F. (2019). Penyuluhan upaya penanggulangan dan pemeriksaan cacingan sebagai implementasi program pesantren sehat. *Transformasi: Jurnal Pengabdian Masyarakat*, *15*(2), 105–114. https://doi.org/10.20414/transformasi.v15i2.1789

Triharini, M. (2019). Upaya Bersama dalam Pencegahan Anemia Kehamilan. *Pediomaternal Nursing Journal*, *5*(2). https://doi.org/10.20473/pmnj.v5i2.21220

Wahyuni, D., & Kurniawati, Y. (2019). Prevalensi Kecacingan Dan Satus Gizi Pada Anak Sekolah Dasar Di Wilayah Kerja Puskesmas Nusa Penida (NP) III, Klungkung, Bali. *Jurnal Ilmiah Kesehatan*, *10*(2), 130–136. https://doi.org/10.37012/jik.v10i2.47