SYSTEMATIC REVIEW OF DIARRHEA INCIDENCE AND ENVIRONMENTAL SANITATION

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ABSTRACT

Toddlers are a highly vulnerable group to diseases transmitted from their surroundings as they are heavily dependent on their parents. Diarrhea remains a global health issue, including in Indonesia. The mortality rate from diarrhea among toddlers remains high in Indonesia, and one of the major risk factors influencing diarrhea in toddlers is environmental sanitation. To identify the potential impact of environmental sanitation on the incidence of diarrhea in toddlers. This research uses a systematic review method by searching literature in various databases. The databases used are Google Scholar, ScienceDirect, PubMed, Scopus, and SpringerLink. The inclusion criteria applied are publications from 2020-2024 and observational study designs.The search identified 17 articles that met the inclusion criteria. Most studies show that sanitation conditions, including toilet cleanliness, access to drinking water, availability of clean water, wastewater management, and waste disposal systems, are associated with the incidence of diarrhea in toddlers. Environmental sanitation plays a crucial role in influencing the occurrence of diarrhea in toddlers. Environmental factors, including toilet conditions, access to clean water, wastewater management, and waste disposal systems, contribute to the risk of diarrhea in toddlers. Additionally, other factors such as handwashing with soap, exclusive breastfeeding, house flooring type, and food and beverage management also play a role in the occurrence of diarrhea.

Keywords: Environmental sanitation, Diarrhea, Toddlers.

INTRODUCTION

Diarrhea is one of the infectious gastrointestinal diseases that continues to be a global health issue, including in Indonesia. Toddlers are a highly vulnerable group to disease transmission from their surroundings because they are heavily dependent on their parents. If parents do not pay sufficient attention to hygiene when caring for their children, the risk of disease transmission increases, one of which is diarrhea. Diarrheal diseases are common illnesses that can lead to an Outbreak (KLB) and remain a major cause of death in Indonesia, particularly among toddlers. Based on the 2018 Riskesdas, Diarrhea is 8% common in all age groups, 12.3% in toddlers, and 10.6% in infants. Additionally, data from the 2018 Sample Registration System show that diarrhea is still a major cause of death, contributing to 7% of newborn deaths and 6% of deaths in 28-day-

old infants. (Kementerian Kesehatan RI, 2018).

One way to prevent disease is through environmental sanitation. According to the definition set by the World Health Organization, sanitation encompasses the supervision of drinking water supply, waste and wastewater management, disease vector control, waste disposal, air quality, occupational safety, living conditions, and food provision and handling (WHO, 2020). Environmental sanitation is a key component in improving health standards. It emphasizes preventing environmental factors that can trigger diseases, thereby avoiding the emergence of illnesses.

Environmental factors that influence the occurrence of diarrhea include access to clean water, proper use of household latrines, effective waste disposal, food hygiene, and regular handwashing practices within the community. (Setiyabudi and Setyowati, 2016).

The 2020 Indonesian health profile says that diarrhea is the second biggest cause of death, following pneumonia, among post-neonatal infants (29 days to 11 months), with a mortality rate of 14%, an increase from 2020's rate of 9.8%. Among children aged 12 to 59 months, diarrhea remains the leading cause of death at 10.3%, up from 4.55% in the previous year. The 2021 Indonesia Nutritional Status Survey indicates a 9.8% prevalence of diarrhea in toddlers. This data highlights that diarrhea continues to be a significant cause of illness and death among toddlers, despite a reduction in the number of cases. (Kementerian Kesehatan RI, 2023).

Numerous research have looked into the relationship between child diarrhea and environmental sanitation. Previous research has identified a significant association between access to clean water ($p=0.036$) and latrine usage ($p=0.000<0.05$) with the prevalence of diarrhea in toddlers (B and Hamzah, 2021). Additionally, another study reported p-values for latrine conditions ($p=0.008$), clean water facilities ($p=0.081$), waste disposal facilities ($p=0.175$), and wastewater drainage systems ($p=0.039$). It can be concluded from these results that wastewater drainage and latrine conditions are related (Fauziyah and Siwiendrayanti, 2023).

This study aims to analyze previous study on the link between environmental sanitation and the prevalence of diarrhea among toddlers in Indonesia. Several studies have explored sanitation and its impact on diarrhea incidence in toddlers across various regions of Indonesia, with differences in research variables, study designs, and findings.

LITERATURE REVIEW

The primary risk factor that significantly influences the occurrence of diarrhea in toddlers is environmental sanitation, involving the family's use of clean water facilities, the presence of family restrooms, waste management, wastewater disposal, and healthy living practices. Risk factors for diarrheal disease are categorized into two groups. Intrinsic factors include age, gender, immune system, gastrointestinal infections, allergies, malabsorption, poisoning, immunodeficiency, and nutritional status. Meanwhile, extrinsic factors include the living environment, healthy and hygienic behavior, education level, community knowledge, individual attitudes toward health, as well as economic status and social culture (Aolina, Sriagustini and Supriyani, 2020). Diarrhea is typically marked by the

passing of stool more than three times a day, with the stool being watery. Diarrhea is categorized into two types: both acute and chronic. Acute diarrhea usually passes quickly, usually less than two weeks or just a few days. Chronic diarrhea tends to last longer, more than three weeks.

RESEARCH METHOD

This study utilizes the Systematic Literature Review (SLR) method, adhering to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The version of PRISMA applied in this research follows the 2020 standards. The PRISMA used in this study is the PRISMA Flow Diagram, which serves as a framework for systematically outlining the study selection process. This flow diagram is essential to ensure transparency and replicability in study selection, as well as to visualize the various stages of the screening process. The purpose of a systematic review is to determine the best outcomes by systematically searching the literature, thoroughly reading all selected texts, analyzing the data from these sources, and drawing conclusions based on that analysis to efficiently, clearly, and effectively solve the problem (Rethlefsen and Page, 2022).

The data sources are obtained from national and international journals. The databases used to search the literature for this study include Google Scholar, ScienceDirect, PubMed, Scopus, and SpringerLink. Keywords for selecting articles were used in both Indonesian and English.

Table 1. Keywords

1.	Environmental Sanitation AND Diarrhea AND Toddlers
2.	Environmental Sanitation AND Diarrhea
3.	Environmental Sanitation AND Toddlers
4.	Clean Water AND Diarrhea AND Toddlers
5.	Clean Water AND Diarrhea
6.	Clean Water AND Toddlers
7.	Sanitation OR Environmental sanitation OR hygiene AND diarrhea OR diarrhoea AND toddler OR children under five

The selection criteria for articles included publications from 2020 to 2024, observational study designs (such as cohort, cross-sectional, and case-control), a focus on toddlers in Indonesia, and an examination of the impact of diarrheal diseases on toddlers in the country.

RESEARCH RESULT

The initial search for articles from academic databases yielded a total of 1,655 articles. These articles were then screened to identify those eligible for inclusion in the systematic review, and the process was documented using a PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram. The screening process was conducted in several stages to ensure the selection of high-quality and relevant studies. The first stage involved filtering out articles that did not have full-text availability, resulting in 1,500 full-text articles selected for further evaluation. This step was crucial to ensure that all

selected studies could be thoroughly reviewed and analyzed.

Following this, the "check for duplicates" feature in the Mendeley reference management application was used to eliminate redundant entries. After removing duplicate articles, 1,040 unique articles remained. This step was necessary to prevent data duplication and to ensure the integrity of the systematic review process. The remaining articles were then assessed for relevance by examining their themes and abstracts. This thematic and abstract review was conducted to determine whether the articles addressed the research questions and were aligned with the objectives of the systematic review. From this assessment, 417 articles were identified as relevant to the study, while 623 articles were deemed irrelevant and were subsequently excluded from further analysis.

To refine the selection further, the 417 relevant articles were evaluated against the predetermined inclusion and exclusion criteria. These criteria were established to ensure the selection of high-quality studies that provided meaningful and reliable evidence related to the research topic. During this evaluation, 17 articles were found to fully meet the inclusion criteria, while the remaining 400 articles did not satisfy the required standards for inclusion. Consequently, 17 articles were selected as the final sample for the systematic review. These selected articles were thoroughly analyzed to extract valuable data and insights relevant to the research objectives.

The entire screening process, from the initial search to the final selection of eligible articles, was documented using the PRISMA flow diagram. This diagram provides a visual representation of the article selection process, including the number of articles identified, screened, assessed for eligibility, and included in the systematic review. It also illustrates the reasons for the exclusion of certain articles at each stage. The use of the PRISMA flow diagram enhances the transparency and reproducibility of the systematic review process, ensuring that the selection of articles is well-documented and unbiased. This systematic and rigorous screening process ultimately resulted in the inclusion of 17 high-quality articles that formed the basis for the comprehensive analysis and synthesis of findings presented in the systematic review. The detailed PRISMA flow diagram illustrating each step of the article screening process can be seen in the accompanying figure.

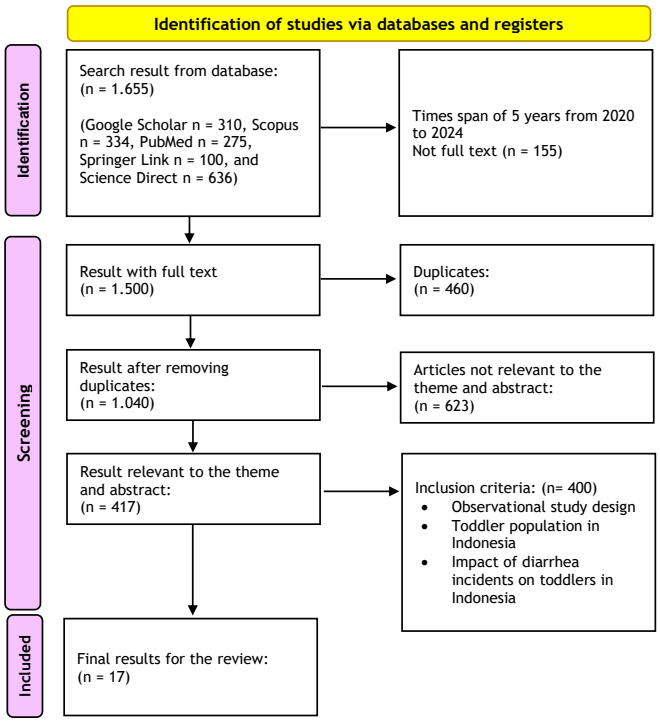

Figure 1. The PRISMA Flow Diagram

Table 2. Selection Results

No.	Penulis: Tahun Terbit	Judul penelitian	Desain Penelitian	Lokasi	Hasil
1.	Sri Dasih & Ardi Bastian. (Dasih & Bastian, 2024)	The Relationship of The Environmental Sanitation With The Diarrhent Events in Children in Kawedekan Village, Balonggebang, Gondang District, Nganjuk Regency	Cross sectional	Balonggebang Village, Gondang Subdistrict, Nganjuk Regency.	The p-value of 0.001 is <0.05, H1 is accepted. This indicates a significant association between environmental sanitation and the occurrence of diarrhea in toddlers.
2.	B & Hamzah. (B & Hamzah, 2021)	Hubungan Penggunaan Air Bersih dan	Cross sectional	Gogagoman Village, Kotamobag	A significant correlation exists between access to

No.	Penulis: Tahun Terbit	Judul penelitian	Desain Penelitian	Lokasi	Hasil
		Jamban Keluarga dengan Kejadian Diare pada Balita		u City, North Sulawesi Province	clean water (p = 0.036) and the availability of latrines (p=0.000< 0.05) with the incidence of diarrhea in toddlers.
3.	Aghadiati et al. (Aghadiati et al., 2023)	Hubungan Personal Hygiene Terhadap Kejadian Diare pada Balita Di Wilayah Keja Puskesmas Aur Duri Kota Jambi	Case control	Working Area of the Aur Duri Health Center	A p-value of 0.391 suggests that H0 is accepted, indicating no significant association between personal hygiene and the occurrence of diarrhea in toddlers.
4.	Wibowo & Wardani. (Wibowo & Wardani, 2024)	Gambaran Sanitasi, Hygiene, Dan Keluhan Diare Pada Balita Usia 12-59 Bulan Di UPTD Puskesmas Rengas Kota Tangerang Selatan Tahun 2023	Cross sectional	Working Area of the Rengas Health Center, South Tangerang	Improper waste management and inadequate drainage systems (SPAL) were found in areas with toddlers complaining of diarrhea. Hygiene practices such as handwashing with soap did not meet standards, resulting in the highest incidence of diarrhea complaints, with 20 respondents (60.6%) reporting issues. Sanitation conditions like healthy toilets and hygiene practices, such as stopping open defecation, met the required standards, and no toddlers were found with diarrhea complaints.
5.	Sinaga, Indirawati & Nurmaini.	The Effect of Community Based Total Sanitation	Cross sectional	Samosir Regency	Handwashing with soap, stopping open defecation, poor food management,

No.	Penulis: Tahun Terbit	Judul penelitian	Desain Penelitian	Lokasi	Hasil
	(Sinaga et al., 2021)	with Diarrhea Among Toddlers			beverage handling, and waste processing all have risks associated with diarrhea in toddlers.
6.	Febriawan, Khasanah & Yusuf. (Febriawan et al., 2024)	The Relationship between Clean and Healthy Living Behavior and Risk of Diarrhea in Toddler	Cross sectional	Kalijaga Permai Public Health Center, Cirebon.	Mothers who do not practice proper clean and healthy living behavior (PHBS) are 4.69 times more likely to have toddlers suffering from diarrhea compared to those who adhere to good PHBS. This is supported by an odds ratio (OR) of 4.69, with a 95% confidence interval (CI) ranging from 3.04 to 7.24, and a p-value of less than 0.001.
7.	Santikaa et al. (Santika et al., 2020)	Determinants of Diarrhea Among Children under Two Years Old in Indonesia	Cross sectional	Indonesia	In Indonesia, 17.16% of diarrhea prevalence in children under two years old is influenced by maternal factors, as there is a correlation with the mother's age, education level, lack of breastfeeding, bottle-feeding, and the type of toilet used.
8.	Febriana & Amelia. (Febriana & Amelia, 2020)	Hubungan Antara Sanitasi Dan Perilaku Pemberian Makan Terhadap Kejadian Diare Pada Balita Di Wilayah Puskesmas Kedung Banteng	Cross sectional	Kedung Banteng Health Center	There is a correlation between sanitation, access to clean water (p=0.008), proper toilet facilities (p=0.000), and dietary habits (p=0.013). Inadequate sanitation and poor eating habits can contribute to an increased risk of diarrhea

No.	Penulis: Tahun Terbit	Judul penelitian	Desain Penelitian	Lokasi	Hasil
9.	Imadudin, Husnina & Andriyani. (Imadudin et al., 2021)	Household Sanitation as A Diarrhea Driving Factor of Under-Five Children in Bojonegoro Regency	Cross sectional	Bojonegoro Regency	A correlation exists between household sanitation and the incidence of diarrhea in toddlers (p = 0.040). Poor sanitation at home can contribute to the development of diarrhea in toddlers.
10.	Kurniawati & Abbiyah. (R. D. Kurniawati & Abiyyah, 2021)	Analisis Sanitasi Dasar Lingkungan Dengan Kejadian Diare Balita di Kelurahan Babakansari Kecamatan Kiaracondong Bandung.	Case Control	Babakansari Village, Kiaracondong District, Bandung	Basic environmental sanitation does not have a significant correlation with the occurrence of diarrhea in toddlers. This is evident from the statistical results on clean water availability (p=0.712), adequate toilet facilities (p=0.420), and waste disposal systems (p=1.000).
11.	Rahayu & Shofiyah. (Rahayu & Shofiyah, 2021)	The Impact of Environmental Sanitation on Diarrhea in Toddlers.	Cross sectional	Working Area of the Nogosari Community Health Center, Boyolali District	There is a significant association between the type of drinking water source (p=0.001), ownership of sanitation facilities (p=0.018), and house flooring type (p=0.036) with the incidence of diarrhea in young children. However, no significant relationship was found between the physical quality of clean water (p=0.307) and the occurrence of diarrhea in infants.
12.	Umiati. (Umiati, 2021)	The Relationship Between Environmental Sanitation with The	Cross sectional	Work Area Nogosari Health Center, Boyolali Regency.	The occurrence of diarrhea is linked to factors such as drinking water sources, toilet ownership, and the

No.	Penulis: Tahun Terbit	Judul penelitian	Desain Penelitian	Lokasi	Hasil
		Event of Diarrhea in Tons of Children in The Work Area of Nogosari Puskesmas, Boyolali Regency			type of flooring. However, There is no discernible relationship between toddler diarrhea incidence and the physical quality of clean water.
13.	Yuniar et al. (Yuniar et al., 2020)	Analysis of Factors Associated with the Incidence of Diarrhea in Toddlers in the Working Area of Puuwatu Health Center, Kendari in 2019	Cross sectional	Puuwatu Health Center, Kendari.	The incidence of diarrhea in toddlers is not strongly related to factors such as access to clean water, household sanitation facilities, wastewater management, maternal practices, or maternal knowledge. However, a significant connection exists between household waste and the prevalence of diarrhea in toddlers.
14.	Maliga et al. (Maliga et al., 2022)	Analysis of Basic Environmental Health Facilities Associated with Risk Factors of Diarrhea Among Toddlers	Case control	Moyo Hilir District, Sumbawa Regency, West Nusa Tenggara.	Wastewater management and the protection of clean water and drinking water sources have a significant impact on the incidence of diarrhea (p-value<0.05)
15.	Kurniawati et al. (D. P. Kurniawati et al., 2021)	Poor Basic Sanitation Impact on Diarrhea Cases in Toddlers	Cross sectional	Leran Village, Bojonegoro, East Java, Indonesia	The occurrence of diarrhea in toddlers is linked to factors such as flooring type (p=0.026), toilet conditions (p=0.000), waste management (p=0.000), and the cleanliness of water sources (p= 0.000).

No.	Penulis: Tahun Terbit	Judul penelitian	Desain Penelitian	Lokasi	Hasil
16.	Iryanto, Joko & Raharjo. (Iryanto et al., 2021)	The Relationship Between Environmental Sanitation Risk Factors and The Incidence of Diarrhea in Children Under Five in Pauh District, Padang City.	Cross sectional	Pauh District, Padang City	There is a correlation between the provision of clean water, the quality of clean water (presence of Escherichia coli), the management and storage of final waste, the condition and quality of disposal channels, and the number of flies around waste disposal locations. However, the number of flies in disposal channels is not related to the frequency of diarrhea in children under five.
17.	Fauziyah & Siwiendrayanti. (Fauziyah & Siwiendrayanti, 2023)	Kondisi Sanitasi Dasar dengan Kejadian Diare Zidni		Tridonorejo Village, Demak Regency	The p-values for the condition of the latrine (p=0.008), the condition of clean water facilities (p=0.081), the condition of waste disposal facilities (p=0.175), and the condition of wastewater drainage systems (p=0.039) show that the wastewater drainage system and the latrine's condition are significantly correlated.

DISCUSSION

According to this systematic review, the bulk of research shows a link between the rising number of toddlers diarrhea cases in Indonesia and latrine quality, the accessibility of clean water facilities, wastewater management, and waste management systems.

Latrine Conditions

From the systematic review, it was discovered that ten articles showed that latrine conditions significantly affect the rate of diarrhea in toddlers. Disease-causing bacteria can spread due to unsanitary latrine conditions. These microbes can enter the body through

direct contact or via animal intermediaries such as insects. Human waste contains various viruses and bacteria, including Escherichia coli. One important factor in environmental sanitation is the proper disposal of human waste. Mistakes in waste disposal can lead to soil and clean water contamination, increasing the risk of disease vectors. Proper handling and disposal of waste according to sanitation standards aim to effectively separate waste to avoid both direct and indirect contact with others.

In Indonesia, the ideal distance between clean water sources and latrines is usually between 8 to 15 meters, with an average of around 10 meters. Proper latrine maintenance can be carried out by the following methods: ensuring the latrine floor is always dry and clean, no scattered trash and cleaning supplies are available, avoiding water puddles on the latrine floor, ensuring no animals or insects are inside the latrine, keeping the toilet seat clean, providing clean water inside the latrine, promptly repairing any damaged parts of the latrine. Additionally, avoid disposing of solid waste that is difficult to degrade (such as used cloth, sanitary pads, metal, glass, etc.) and toxic chemicals harmful to bacteria into the latrine pit (Sadi, 2018).

According to Minister of Health Regulation No. 3 of 2014 on Community-Based Total Sanitation, the use of healthy toilets is one way to prevent disease transmission. Every household is required to have a toilet that meets health standards, consisting of an upper structure (walls and roof) to protect users from weather conditions, a middle structure with a waste disposal hole that ideally uses a goose neck or is covered if not, and a waterproof, non-slip floor connected to the Wastewater Disposal System (SPAL). The lower structure, in the form of a septic tank, functions to store and treat human waste to prevent environmental contamination. If infiltration is not feasible, a filter must be installed to manage liquid waste (Permenkes, 2014).

Clean Water and Drinking Water Facilities

The systematic review shows that nine articles indicate the significant impact of clean water and drinking water services on the occurrence of diarrhea in toddlers. Every individual requires access to clean water, as it plays a vital role in daily activities such as drinking, cooking, and washing. However, rapid growth has made clean water increasingly difficult to obtain and access. Limited availability of clean water can increase the risk of various diseases, including respiratory infections, skin diseases, and diarrhea, particularly among toddler. Water can serve as a medium for disease transmission because pathogens multiply and spread through contaminated water (S and Widiastutie, 2023)

Water can transmit diseases through microorganisms that spread via water (waterborne diseases) or through equipment washed with contaminated water (water-washed diseases). Most diarrhea cases are caused by bacterial infections that spread through the fecal-oral route. Diarrheal diseases can be transmitted through fluids or objects contaminated with feces, such as drinking water, hands, or food prepared in containers washed with contaminated water (Harsa, 2020). Additionally, maintaining the cleanliness of water sources and storage is crucial. Storing water in clean, covered containers can prevent contamination by foreign objects that may cause illness.

Drinking water is water that is safe for direct consumption because it meets health standards, including physical, microbiological, chemical, and radioactive aspects. To fulfill these health requirements, water from natural sources must first undergo a treatment process to ensure its quality and quantity meet the established standards (Labado & Wulandari, 2022). From a physical perspective, safe drinking water should be free from odor, taste, color, or turbidity. In terms of bacteriological aspects, the water must be free from Escherichia coli (E. coli) bacteria, which can cause illness. Regarding chemical content, drinking water should not contain toxic chemicals, and any dissolved substances must be within the permitted safe limits. By meeting all these requirements, the water is considered safe and healthy for public consumption (Astawan & Sofyandi, 2024). To obtain safe and healthy drinking water, proper processing is necessary to ensure that the water meets drinking water quality standards. One of the simplest and most effective methods is boiling the water until it reaches a rolling boil to kill harmful germs and microorganisms. After boiling, it is crucial to store the water in a thoroughly cleaned container to prevent recontamination. Although boiling can eliminate most bacteria and pathogens, the risk of recontamination remains if the storage process is not carried out properly. One common source of contamination is from water dispensers. For instance, leftover water that stagnates at the bottom of a gallon or dispenser can serve as a breeding ground for bacteria. Additionally, microorganisms present in the surrounding air can come into direct contact with the boiled water, increasing the potential for recontamination. This issue becomes more severe if poor storage practices continue, such as failing to clean the gallon or dispenser regularly. As a result, the quality of drinking water may deteriorate despite the boiling process. Contaminated water with pathogenic microorganisms poses a high risk of causing diseases, including diarrhea (Astawan & Sofyandi, 2024). Therefore, besides boiling the water, it is also essential to pay attention to the cleanliness of storage containers, dispensers, and the surrounding environment to prevent recontamination. Educating the public about maintaining hygiene during the water storage process is also crucial to minimize the risk of waterborne diseases.

Wastewater Management

The systematic review shows that seven articles indicate that wastewater management significantly affects the incidence of diarrhea in toddlers. Safe household wastewater management is essential to avoid stagnant water, which can lead to the spread of environmentally-based diseases (Permenkes, 2014). The Wastewater Disposal System (SPAL) channels household wastewater for disposal. Proper wastewater management involves how families dispose of wastewater generated from daily activities. Areas around the home, such as trash bins and wastewater drains, can become breeding grounds for flies and other disease-carrying vectors (Miswan, Ramlah and Rasyid, 2018). Both the environment and human health are greatly impacted by efficient wastewater treatment. When wastewater is improperly disposed of, it can contaminate soil and water, spreading illnesses like diarrhea. Additionally, indiscriminate wastewater disposal can cause unpleasant odors and

negatively affect the aesthetic quality of the environment.

Waste Disposal Facilities

The systematic review reveals that four articles highlight the influence of waste disposal facilities on the incidence of diarrhea in toddlers. Poor waste management can trigger various health issues, including the spread of bacteria and viruses. Organic waste, such as food scraps, can serve as a breeding ground for bacteria and viruses. Bacteria such as Escherichia coli, Salmonella, and viruses like rotavirus can cause diarrhea if they enter the human body. Accumulation of waste creates an unhealthy environment, which can become a breeding ground for pathogens that cause diarrhea. A dirty environment also increases the community's vulnerability to infections.

Garbage can also attract flies and other insects. Flies that land on contaminated waste can carry bacteria and viruses, transferring them to food or other surfaces touched by humans, leading to infections. Moreover, improperly disposed waste can contaminate groundwater and surface water. Water contaminated by pathogens from waste may be used for drinking, washing, or bathing, leading to diarrhea.

Personal Hygiene

The habit of handwashing as part of personal hygiene in mothers plays an important role in preventing diarrhea in toddlers. Based on a review of 18 literature studies, four of them consistently show that regularly washing hands with soap and clean water can reduce the risk of diarrhea in toddlers. This is due to the decreased likelihood of spreading germs and bacteria that cause diarrhea, which can be transmitted through unclean hands, especially after defecation, cleaning a child, or before preparing food. By developing the habit of proper handwashing, mothers not only maintain personal hygiene but also protect toddlers from the risk of diarrhea. Findings from several studies highlight the importance of educating mothers about correct personal hygiene practices as an effective measure to prevent diarrhea and maintain the health of toddlers.

CONCLUSION

Environmental sanitation greatly influences the prevalence of diarrhea in toddlers. Factors such as toilet conditions, access to clean water, wastewater management, and waste disposal facilities contribute to this issue. Additionally, other aspects, including handwashing with soap, exclusive breastfeeding, household flooring type, and food and beverage management, contribute to the prevalence of diarrhea as well.

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