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1. DISPARITAS IN SANITATION AS A RISK FACTORS OF DIARRHEA AMONG U-5 IN INDONESIAN HOUSEHOLD

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ABSTRAK ← 11pt, Times New Roman bold, italic

Akses terhadap sumber air bersih merupakan kebutuhan utama manusia, dan merupakan tanggung jawab negara untuk memastikan bahwa seluruh warga negara mempunyai akses terhadap sumber air bersih yang layak. Penelitian ini bertujuan untuk menganalisis akses sanitasi yang aman terkait penyakit diare pada tingkat rumah tangga di pedesaan dan perkotaan berdasarkan data SDKI 2017. Desain studi analitik, cross-sectional dengan menggunakan database Survei Demografi dan Kesehatan Indonesia (SDKI)-2017 dari Badan Survei Demografi dan Kesehatan, pada bulan Oktober hingga Desember 2022. Sebanyak 2364 dari 16554 total sampling balita dari database rumah tangga diambil sub-set sampling balita yang menderita diare. Instrumen yang digunakan adalah data spesifik SDKI pada bagian rumah tangga dan perempuan Wanita Usia Subur (WUS), umur anak, jenis kelamin, pendidikan ibu, wilayah tempat tinggal, fasilitas jamban, dan sumber air minum sebagai akses terhadap kebutuhan sanitasi. Dilakukan analisis deskriptif dan uji chi-square dengan software SPSS versi 25 dan tingkat kemaknaan <0,05. Kegagalan menjaga pasokan air bersih dapat menyebabkan epidemi penyakit yang ditularkan melalui air akibat dari kontaminasi tinja pada sumber air bersih. Penyebabnya karena pengelolaan limbah padat tempat tinggal yang buruk, berdampak terutama pada populasi berisiko tinggi seperti anak balita.Situasi ini bukan hanya menjadi tanggung jawab sektor kesehatan namun juga peran lintas sektoral lainnya. Tanpa kerja sama yang baik dan pembagian tanggung jawab, permasalahan kesehatan terkait WASH tidak akan terselesaikan sepenuhnya.

. Abstrak tidak menambahkan informasi baru dari isi artikel, tetapi merangkum isi penelitian. Abstrak harus bisa dipahami tanpa membaca makalah. Abstrak tidak boleh mengandung kutipan. Abstrak tidak boleh mengandung ilustrasi, gambar, atau tabel, atau referensi apa pun. Jumlah kata dalam abstrak bahasa Indonesia 200-250 kata. ← 10pt, Times New Roman italic

Kata kunci: Akses Sanitasi; Diare; Tingkat rumahtangga; Balita *kata kunci pertama; kata kunci kedua; kata kunci ketiga, dst (3-5 kata) ← 10pt, Times New Roman italic*

ABSTRACT ← 11pt, Times New Roman bold, italic

Access to clean water sources is a major human need, and it is the responsibility of the state to ensure that all citizens have access to the proper source of clean water. The study aims to analyze safe access of sanitation related to diarrheal disease in rural and urban areas based on IDHS 2017 data at the National household level. An analytical, cross-sectional design by using a database of Indonesia's Demographic and Health Survey (IDHS)-2017 from the Demographic and Health Survey Agency, from October to December 2022. By total sampling of under-5 children from the household database, and sub-set sampling of 2364 under-5 with diarrhea out of 16554. The instruments used were specific data of IDHS questionnaires on household and women's section i.e. women of childbearing age (WUS), children's age,

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sex, mother's education, area of residence, latrine facilities, and sources of drinking water as access to sanitation of requirement. The analysis was performed by descriptive and chi-square test analysis with software of SPSS version 25 and a significance level of <0.05. Failure to maintain the integrity of the water supply could develop epidemics of waterborne diseases, illnesses, and transmitted diseases through fecal contamination of drinking water. The overflow of wastewater into open fields and ditches or the mismanagement of solid waste of human habitation could result in vector-borne diseases, especially for high-risk populations such as the U-5 children. This situation is not only the health sector's responsibility but also other sectoral roles. Without good cooperation and sharing of responsibilities, health problems related to WASH will not be completely resolved

Keywords: Access Sanitation; Diarrhea; Household-level; Under-5
(3-5 keywords) ← 10pt, Times New Roman italic

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Pendahuluan ← 12pt, Times New Roman bold

Naskah ditulis menggunakan kertas ukuran A4 dengan margin kanan 2cm, atas 2 cm, bawah 2 cm, dan kiri 2,5 cm. Spasi alinea 1,15 dan jumlah halaman 7-10. Paragraf terdiri dari minimal 3 kalimat.

In Indonesia by the year 2030, two-thirds of the total population is predicted to live in cities and experience rapid urbanization and a shift in population. The Indonesian government has made a major national commitment to child welfare, including a commitment to realizing the 2030 Agenda for Sustainable Development. The Development Plan National Medium Term (*RPJMN*) 2020–2024 prioritizes investment for human development, including providing health services, birth registration, social protection, education (including the development of early childhood at the village level), and child protection. [1]

Urbanization will have a significant impact also on children. Diseases and poverty are also known as linked as a vicious cycle due to urbanization. Poverty is the cause of almost all challenges faced by children in Indonesia, such as health conditions, school opportunities, circumstances safe from violence and exposure to harmful pollutants, and much more. Although poverty in Indonesia has generally declined over the past decade, inequality has sharpened. The child is the group most affected by poverty more than the rest of the population. The poverty situation in Indonesia could not be separated from the spatial dimension, with significant differences between urban and rural areas. The poverty rate in rural areas is higher than in urban areas. Compared to urban areas, children living in rural areas are much more at risk of experiencing not only poverty in terms of income, but also various forms of deprivation, such as lack of sanitation facilities, incomplete immunization, lack of health insurance, inadequate nutrition, lack of opportunity to get basic education, births are not recorded, in-adequate housing conditions, and so on.

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However, access to water, sanitation, and hygiene (WASH) still remains an interesting issue to resolve. [2]

The absence of clean water sources, hand washing facilities, and latrines in most health posts and delivery clinics shows that the difficult-to-reduce neonatal mortality rate may be closely related to the lack of basic hygiene facilities. Under-five mortality fell from 97 deaths per 1000 live births (1990) to only 32 per 1000 live births (2017). However, diarrhea and pneumonia are still the leading cause of death for under-five children (respectively contributing 25% and 16% of the mortality rate). To obtain the greatest health benefits, improvements in sanitation and hygiene must be carried out, in addition to the need for adequate access to clean water. Adequate and equitable access to water, sanitation, and hygiene facilities is very important to preventing disease. Ensure that the results of health, nutrition, and development efforts can be felt by the children.

Indonesia has shown significant progress in improving access to adequate water supplies and sanitation across the country and demonstrates a strong commitment to continuously improving the quality of sanitation access by promoting *Sanitasi Total Berbasis Masyarakat* (*STBM*) or Community Total Led Sanitation (CTLS). STBM is made up of five pillars, such as Stop Defecating Randomly Large (BABS), Wash Hands with Soap (CTPS), Household Drinking Water and Food Management (PAMMRT), Home Waste Management Stairs (PSRT), and Household Wastewater Management (PALRT). The STBM National Strategy includes outcome indicators, such as lowering the prevalence of diarrheal illnesses and other environmental diseases linked to sanitation and behavior. Services access to WASH varies across regions and between socio-economic groups.

There are many known diseases related to poor sanitation and hygiene practices, such as diarrhea, cholera, dysentery, shigellosis, salmonellosis, typhoid, hepatitis, trachoma, and soil-transmitted diseases. Diarrhea disease, which mainly results from poor water quality, sanitation, and hygiene, is the major cause of death for children under five in Indonesia. The majority of the Indonesian population, only 89% have access to a minimum of basic drinking water services (i.e. decent drinking water, which is a total of 30 minutes of a journey back and forth in several areas). Estimated, only three-quarters of Indonesia's population can access at least basic sanitation facilities with significant variation between rural and urban areas. The definition of "*access to safely managed sanitation*" according to the Ministry of Health of Indonesia includes households with access to proper sanitation on their own property, whether connected to the exhaust system or septic tank with desludging service for the last five years. If the stricter definition of WASH targets according to the SDGs is applied, the access rate will drop drastically. Another challenge in providing safe-managed sanitation services is due to a low level of public awareness of the importance of safe sanitation. Disease reduction also leads to savings for communities of health care and chronic illnesses. This study aims to analyze and evaluate safe access to sanitation related to diarrheal disease in rural and urban areas based on IDHS 2017 data at the national household level.

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Metodologi ← 12pt, Times New Roman bold

Study design and sampling method

The study used a cross-sectional and analytical method, examining secondary data from the 2017 Indonesian Health Demographic Survey (IDHS). Based on the definition supplied by *the Badan Pusat Statistik (BPS)* of the Republic of Indonesia, we utilized the phrase area of comparisons between urban and rural. The IDHS 2017 sample was intended to be representative of the national, provincial, urban,

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and rural levels. Samples were collected from 1970 blocks in 34 Indonesian provinces, including urban and rural. With 25 families per census block, the estimated number of household samples was 49250. It is made up of 25,300 urban household samples and 23,950 rural household samples. The minimum sample size reference that must be satisfied for the average Relative Standard Errors (RSE) estimate of 3.5%, after which the total household sample for each province is determined. The 2017 IDHS samples were stratified by province and urban/rural categorization. (IDHS 2017). For this study, the inclusion criteria were only chosen for the under-5 years and their mom's, and suffered diarrhea. Thus we get 2364 out of 16554 the U-5 with diarrhea.

Instruments Section of 2017 IDHS Questionnaire

The IDHS's instruments consist of 4 sections, household, women's, married man's and never married man questionnaires. This study took 2 out of 4 sections of questionnaires i.e. household and woman's section questionnaires. The specific data of women's questionnaires focus on children's age and sex (*section: reproduction, instrument code number: 211*), the child had diarrhea in the last 2 weeks (*section: identification location, instrument code number: 5*) and the mother's education (*section: child health and nutrition, instrument code number: 608*). The specific data of household questionnaires contain an area of residence (*section: identification location, instrument code number: 5*), latrine facilities (*section: household characteristics, instrument code number: 109*), and sources of drinking water (*section: household characteristics, instrument code number: 101*) as an access to sanitation of requirement. All open-ended items were coded once the data items of study were checked. The replies were recorded and checked, and computer-identified mistakes were excluded to continue further analysis.

Statistical Analysis

SPSS version 25 for Windows was used to enter and evaluate data. The Kolmogorov-Smirnov method was used to determine data normality in this investigation. To characterize sample characteristics, simple descriptive and Fisher's exact were utilized due to the abnormality of the data. The data analysis has a significance level of less than 0.05. The study was conducted from October to December 2022 by requesting IDHS's data survey by email to the Demographic and Health Survey Agency (IDHS data source: *https://dhsprogram.com/data/dataset/Indonesia_Standard-DHS_2017.cfm?flag=0*).

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The database contains national-level data on 2364 /2359 diarrhea cases among under-5 children living in urban and rural settings. In cities, 15.1% of children under the age of five had diarrhea, with males having the highest frequency between the ages of 24 and 59 months. Mothers were generally from less educated backgrounds, with 53% having not completed 9 years of formal schooling. Rural regions showed a 54.8% higher prevalence of diarrhea and the same proportion of age-related diseases as urban areas. (Table 1).

In a comparison of the two areas, children U-5 years who lived in households provided with a proper latrine facility had a lower percentage of diarrhea and showed significant differences in association ($p<0.05$) between improper latrine facilities with the incidence of diarrhea. Diarrhea among U-5 was more common among households that used adequate drinking water sources in both areas. However, a significant difference in association is less than *0.05* between drinking water sources and the incidence of diarrhea only in the urban area. (Table 2.)

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Based on 2017 IDHS data, there is a significant difference ($p<0.05$) between urban and rural regions in access to sanitation (*latrine facilities and drinking water sources*) and the incidence of diarrhea. A surprising result in both regions of study was a significant number of children suffering from diarrhea among families with good access to sanitation. Nonetheless, children in rural regions with inadequate latrines and drinking water sources were 2-5 times more likely than those in urban areas to acquire diarrhea as a disease burden. (Table 3.)

High-quality water, sanitation, and hygiene are crucial for children's survival and development. Diarrhea remains the leading cause of child death and morbidity. Access to safe water, sanitation, and hygiene is essential for children's survival and development. Diseases like diarrhea, for example, continue to be the top cause of infant mortality and morbidity, owing mostly to inadequate WASH practices. As a result, it is critical to ensure that children have access to clean water, sufficient sanitation facilities, and excellent hygiene habits in order to provide a good foundation for their health and well-being. Poor water and sanitation practices are a major contributor.

The socioeconomic status of a household is the primary determinant of whether or not it has access to adequate sanitation facilities or not.

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Table 1. Judul Tabel

Kategori	Umur (Years)	Standar Deviasi	Jumlah (Orang)
1	20-44	8.18	10
2	45-60	7.94	10
3	≥60	7.78	8
Total Pasien			28

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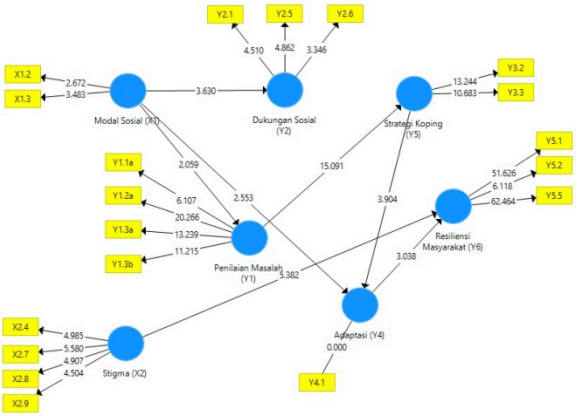

Gambar 1. Judul Gambar

Bagian ini tidak mengulangi pendahuluan, namun menjelaskan masalah yang harus diatasi, dan menganalisis pembaruannya. Pada masalah apa kita harus berkonsentrasi, membahas atau menguraikan?. Solusi apa yang dapat direkomendasikan untuk menyelesaikan masalah ini?. Apa yang akan menjadi masalah baru, berbeda, dan inovatif?. Bagaimana penelitian ini mampu memberikan kontribusi pada ilmu pengetahuan.[5,6] ← 11pt, Times New Roman

Kesimpulan ← 12pt, Times New Roman bold

The high prevalence of diarrhea can be reduced by including interventions within a comprehensive sanitation strategy. These initiatives include increasing access to safe drinking water, encouraging good hygiene behaviors, and creating effective waste management systems. A whole sanitation strategy can greatly reduce the incidence of diarrhea by addressing its underlying causes, such as polluted water and inadequate sanitation conditions. Furthermore, teaching people about the need for handwashing and providing proper toilets will help to reduce diarrhea in Indonesia.

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Referensi ← 12 pt, Times New Roman bold

Referensi menggunakan sumber acuan **10 tahun terakhir**, **70% adalah artikel jurnal**, **minimal 10 referensi**, mengikuti metode **Vancouver, ukuran Font 11pt, Times New Roman.** Harap menggunakan aplikasi citation dan reference manager seperti Mendeley, Zetero, EndNote, dst. Berikut contoh referensi yang mengikuti metode Vancouver:

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