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Research Article

ANALYSIS OF THE CLEAN AND HEALTHY LIVING BEHAVIOR ON DIARRHEA INCIDENCE AMONG CHILDREN AGED 6–12 YEARS IN MOROSI HEALTH CENTER

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ABSTRACT

Background:
The Clean and Healthy Living Behavior (CHLB) is important for prevent diarrhea, which is still common in children school. WHO (2024) states diarrhea causes 8% of deaths children in developing countries consequence sanitation bad and low habit hygienic. Research This aim analyze relationship between CHLB and incident diarrhea in children ages 6–12 years in the work area Morosi Community Health Center.
Methods: Study This use approach quantitative cross-sectional. Population totaling 902 children, with sample as many as 90 children were taken use Slovin's formula. Data collected through questionnaire closed and inspected water laboratory, including four CHLB variables: washing hand use soap, ownership toilet healthy, clean water provision, and consumption vegetables and fruit. Analysis using the chi-square test and the phi coefficient.
Results: The results show all CHLB variables are related significant with incident diarrhea, with strength connection medium: hand washing (φ = 0.346), healthy toilets (φ = 0.517), clean water (φ = 0.544), and consumption of fruits and vegetables (φ = 0.451).
Conclusion: In conclusion that behavior hygiene and pattern consumption Healthy lower risk diarrhea. It is recommended existence intervention government, health centers, and parents for push implementation of CHLB consistent.

Keywords: diarrhea, school-age children, handwashing, sanitation, clean water, healthy eating

INTRODUCTION

Clean and Healthy Living Behavior (CHLB) is a series of actions taken on awareness individuals, families, and communities (1) where For prevent disease, increase health, and play a role active in create environment healthy. One of the closely related diseases relation with behavior life clean and healthy is disease diarrhea, especially in children age school basic (2).

Diarrhea Still become problem health serious society, especially children Ages 6–12 years. Disease This can caused by various factors, one of which is is habit less life clean like No wash hand with soap, use toilet that is not healthy (3), drinking water that is not hygienic, as well as low consumption important vegetables and fruits For Power stand body (4).

According to report of the Ministry of Health of the Republic of Indonesia (5) diarrhea occupy position third in ten big disease most reported in the facility service health in Indonesia. Evaluation For implementation of promotional programs must also be always done Because For see success prevention disease infectious specifically diarrhea in every region (6). Southeast Sulawesi, including Regency Konawe, still take notes prevalence disease enough diarrhea height in children age school (7).

Data from Morosi Health Center shows that Still Lots child aged 6–12 years who experience diarrhea Recurring. This is thought to be related to the low level of CHLB implementation, both at home and at school. Children at this age are beginning to gain independence in maintaining personal hygiene, but are still heavily influenced by family and environmental habits.

Handwashing with soap (CTPS), use of healthy latrines, consumption of clean water, and adequate consumption of fruits and vegetables are important indicators of healthy living (CHLB). Lack of understanding and practice of CHLB by children and their families can increase the risk of diarrhea. Therefore, understanding the factors of CHLB is crucial for effectively preventing diarrheal disease.

This study aims to analyze the relationship between clean and healthy living behaviors (CHLB) and the incidence of diarrhea in children aged 6–12 years in the Morosi Community Health Center work area. Based on these conditions, the researcher is interested in conducting a study entitled: "Analysis of Clean and Healthy Living Behavior on the Incidence of Diarrhea in Children Aged 6–12 Years in the Morosi Community Health Center Work Area."

MATERIAL AND METHODS

This research is an analytical quantitative study with a cross-sectional design (8) conducted in May–June 2025 in the working area of the Morosi Health Center, Konawe Regency. Population as many as 902 children ages 6–12 years, with sample of 90 selected children proportional random sampling from 10 villages use Slovin's formula. Primary data obtained from parent questionnaire and drinking water examination House stairs; secondary data originate from report Health Center. Instruments cover CHLB questionnaire CTPS, toilet healthy, clean water, consumption vegetables and fruits and laboratory test forms E. coli and coliform. Data analysis using chi-square test and phi coefficient (φ), presented in distribution table and cross tabulation. Research This fulfil ethics research, including informed consent, anonymity, and data confidentiality.

RESULTS

Respondent's Characteristics

This study was conducted to determine the relationship between clean and healthy living behavior and the incidence of diarrhea in the Morosi Community Health Center working area. The sample taken was 90 respondents collected based on a questionnaire. The results of the data processing can be presented as follows.

Table 1. Characteristics Table Respondents in the Work Area Morosi District Health Center Konawe

Research Variables	N	%
Age of Child (Years)		
6	9	10,0
7	16	17,8
8	17	18,9
9	20	22,2
10	15	16,7
11	9	10,0
12	4	4,4
parents last education	**N**	**%**
SD	12	13,3
SMP	37	41,1
SMA	30	33,3
PT	11	12,3
Total	**90**	**100,0**

Source : Primary Data, 2025

Based on the table above, the distribution of respondents according to the age of the child shows that the most common age of the child is 9 years old, with 20 children (22.2%). Meanwhile, the least common age is 12 years old, with 4 children (4.4%).

Distribution respondents according to level parental education show that majority of parents 37 respondents (41.1%) had a junior high school education, followed by 30 respondents (33.3 %) with a high school education. college high (PT) as many as 11 respondents (12.3%), and the least 12 respondents (13.3%) had elementary school education.

Table 2: Distribution Frequency Based on Sufferer Disease Diarrhea, CTPS Behavior, Healthy Toilets, Clean Water Provision, Consumption Produce and Vegetables in the Work Area Morosi District Health Center Konawe

Characteristics Respondents	n	%
Diarrhea		
No Suffering	57	36.7
Suffer	33	63.3
Handwashing Behavior		
Not good	45	50.0
Good	45	50.0
Healthy Toilet		
Does not meet the Condition	52	57.8
Fulfil Condition	38	42.2
Clean Water Provision		
Does not meet the Condition	51	56.7
Fulfil Condition	39	43.3
Drinking Water Provision		
Not good	51	56.7
Good	39	43.3
Total	**90**	**100.0**

Source : Primary Data, 2025

Table 2 shows that of the 90 respondents, 57 children (63.3%) did not suffer from diarrhea and 33 children (36.7%) suffered from diarrhea.

For Behavior wash hand use soap show of 90 respondents there were 45 (50.0%) children behavior wash hand with soap Already good, and as many as 45 (50.0%) children behavior wash hand wear soap Still not enough Good.

For use Healthy Toilets show of 90 respondents there were 38 (42.2%) respondents who had toilet that meets requirements, and as many as 52 (57.8%)

respondents own toilet that is not fulfil condition.

For Clean Water Provision of 90 respondents There were 39 (43.3%) respondents who had sufficient water requirements, and as many as 51 (56.7%) respondents have water that is not fulfil condition. For Consumption fruits and vegetables from 90 respondents There were 39 (43.3%) respondents who consumed good fruit and vegetables, and as many as 51 (56.7%) respondents consumed lack of fruits and vegetables Good.

Table 3: The Relationship Between CTPS Behavior, Healthy Toilets, Clean Water Provision, Behavior Consumption of Vegetables and Fruits To Incident Diarrhea in Children Aged 6-12 in the Work Area Morosi District Health Center Konawe.

Variables	Incident diarrhea						Results Statistical Test
	Diarrhea		No Diarrhea		Total		
	N	%	N	%	Σ	%	
CTPS							
Not good	36	80.0 %	9	20.0%	45	100	X^2 Count =9.378
Good	21	46.7 %	24	53.3%	45	100	X^2 Table = 3.841
Total	**57**	**63.3**	**33**	**36.7%**	**90**	**100**	Phi (φ) = 0.346
Healthy Toilet							
Does not meet the Condition	44	84.6 %	8	15.4%	39	100	X^2 Count = 21.899
Fulfil Condition	13	34.2%	25	65.8%	51	100	X^2 Table = 3.841
Total	**57**	**63.3%**	**33**	**36.7%**	**90**	**100**	Phi (φ) = 0.517
Clean Water Provider							
Not good	44	86.3 %	7	13.7%	51	100	X^2 Count 24.442
Good	13	33.3 %	26	66.7%	39	100	X^2 Table = 3.841
Total	**57**	**63.3 %**	**33**	**36.7%**	**90**	**100**	Phi (φ) = 0.544
Consumption of Vegetables and Fruits							
Not good	42	82.4 %	9	17.6%	51	100	X^2 Count = 16.492
Good	15	38.5 %	24	61.5%	39	100	X^2 Table = 3.841
Total	**57**	**63.3 %**	**33**	**36.7%**	**90**	**100**	Phi (φ) = 0.451

Source : Primary Data, 2025

Based on analysis bivariate show distribution practice behavior life clean and healthy (CHLB) based on observed indicators: washing hands with Soap (CTPS): children who do not routinely do CTPS have diarrhea by 80.0%, while the routine ones were only 20.0%.

Use healthy toilet : Children who use it toilet no healthy experience incident diarrhea as much as (84.6%), taller compared to children who use toilet healthy (15.4%).

Clean water consumption: Children who consume water that is not worthy (contaminated) to experience diarrhea as much as 86.3%, while those who consume clean water only 13.7%.

Consumption of vegetables and fruits : Children who rarely consume vegetables and

fruit experience diarrhea by 82.4%, while children who regularly consume experience diarrhea only 17.6%.

Chi-square test results for each indicator show p -value < 0.05, which means there is significant relationship between every CHLB indicators with incident disease diarrhea. Coefficient (φ) test also shows strength connection in category moderate, with Values: CTPS: φ = 0.35, healthy toilet: φ = 0.51, clean water: φ = 0.54, Vegetable-Fruit Consumption: φ = 0.45.

Findings This show that behavior life bad clean and healthy in a way real increase risk incident disease diarrhea in children ages 6–12 years in the work area Morosi Community Health Center.

DISCUSSION

Research result this show that there is significant relationship between behavior life clean and healthy (CHLB) with incident disease diarrhea in children ages 6–12 years in the work area Morosi Community Health Center. CHLB indicators studied covering habit wash hand use soap (CTPS), use toilet healthy, consume clean water, and consumption vegetables and fruit.

Findings This strengthen various studies previously stated that diarrhea in children is greatly influenced by sanitation basics and habits life clean. Children who do not used to wash hand before Eat or after defecate own risk more tall caught diarrhea, because contaminated hands become a medium of transmission germs pathogen like Escherichia coli and Shigella (9).

Use toilet that is not healthy too factor important. Toilets that are not equipped with a septic tank or left alone open can pollute groundwater and the environment around. This is in accordance with research by Hidayati (10), which states that behavior defecate carelessly and not availability toilet worthy of being very related with incident diarrhea in rural areas. Darn research (11) examined connection between CHLB in particular use toilet to health public.

In addition, the quality of drinking water house stairs are also proven correlated with incident diarrhea. Examination results laboratory to water samples shows the presence of E. coli bacteria and coliform, which indicates contamination fecal. Consumption of water that is not cooked or filtered in a way adequate increase risk child exposed microorganisms reason diarrhea (11). Research This in line with study by Nazli, which found that house stairs that use clean water worthy experience incident diarrhea more low compared to house the source of the stairs the water polluted (12). In line with research (13) drinking water quality house stairs are also proven correlated with incident diarrhea.

Consumption vegetables and fruit also show influence to incident diarrhea. Children who rarely consume vegetables and fruit tend own power stand more body low (14). Fiber and vitamins in vegetables and fruit play a role important in guard health channel digestion and system immune (15). Lack of intake nutrition balanced can make child more prone to infections, including diarrhea (16). This result supported by research (17), which shows connection between pattern underconsumption healthy with improvement risk disease infection channel digestion in children. And also (18) about underconsumption healthy correlated with improvement risk disease infection channel digestion in children. Nutrition education is also necessary done for increase knowledge mother toddler (19) and understanding mother toddler must given as early as maybe so that it gets better understand they about importance nutrition child (20).

Based on statistical tests, all CHLB indicators have mark significant that is calculated X^2 value > table X^2 value, which shows that each indicator own real relationship with incident diarrhea. A phi coefficient (φ) value between 0.31–0.50 indicates that strength connection nature moderate, meaning the more bad CHLB practices, increasingly the incidence is also high diarrhea in children.

Findings This confirm importance intervention-based education and coaching families in the work area Morosi Health Center for increase implementation of CHLB at home stairs. Community Health Center need active do counseling about importance wash hand with correct, use toilet healthy, proper drinking water treatment, as well as consumption nutrition balanced with multiply vegetables and fruit (21).

Involvement schools and teachers are also important, considering child ages 6–12 years use up part big time they are in the environment school. The School Health Effort program can made into receptacle For form habit life clean since early. In addition, collaboration cross sectors, such as between health centers, villages and schools, become key in create supportive environment behavior life clean and healthy.

With increase CHLB practices in general comprehensive, expected prevalence disease diarrhea in children age school can pressed in a way significant, as well as increase quality life children in the work area Morosi Health Center in general.

CONCLUSION

Based on the research results, it can be concluded that the study shows a significant relationship between CHLB (Cleanliness and Health) and the incidence of diarrhea in children aged 6–12 years in the Morosi Community Health Center area. All CHLB indicators Handwashing (HW), healthy latrines, clean water, and fruit and vegetable consumption—were significantly related (X2 calculated = > X2 table value), with moderate strength (φ = 0.31–0.50). The better CHLB is implemented, the lower the risk of diarrhea, making CHLB an important factor in preventing diarrhea in elementary school children.

It is recommended that the government and the Health Office strengthen sanitation and CHLB policies by providing healthy latrines, clean water, and ongoing education in villages. The Morosi Community Health Center is advised to increase outreach at the Health Unit (UKS) and Integrated Health Posts and routinely monitor CHLB and household water quality. Parents are expected to practice HWWS (Handwashing Handwashing), use healthy latrines, provide clean water, and serve vegetables to children. Future researchers can use this study as a basis for research on CHLB interventions for other diseases, such as acute respiratory infections (ARI), using a longitudinal approach and considering socio-environmental factors.

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