BENIH

Benih : Journal of Midwifery
Volume 04, Number 02, 2025, doi.org/10.54209/benih.v4i02.488
E.SSN : 2829-4513 (Online)
https://journal.cdfpublisher.org/index.php/Benih/index

The Effect Of Giving Nutmeg Fruit On Diarrhea For Toddlers Aged 1-5 Years At Syahruddin Clinic

Wahidah[1], Motris Pamungkas[2], Farida Umamy[3]
STIKes Sakinah Husada[1], STIKes Darma Husada[2], Sekolah Tinggi Ilmu Kesehatan As Syifa[3]

Article Info

Keywords:
Diarrhea
Toddlers aged 1-5 years
nutmeg

ABSTRACT

The main cause of death in diarrhea sufferers is a lack of fluids and electrolytes (dehydration) through soft to liquid stools and if left untreated can result in the body being unable to function normally (Hospital Care for Children, 2016). The study was conducted to determine the effectiveness of nutmeg on diarrhea in toddlers aged at Mutiara Health Center. This type of research is a pre-experimental design with out control. The subjects of this study were 20 toddlers aged 1-5 years who experienced diarrhea. The research instrument was the provision of nutmeg in the pre-test and post-test. The analysis technique used was the Wilcoxon test completed by the SPSS program. The results of the study showed that there was an effectiveness of nutmeg on diarrhea. The results of the data analysis showed that before being given treatment, the number of toddlers who experienced diarrhea was 20 respondents or 100% and after being given nutmeg treatment, there was a change in the incidence of defecation to normal in toddlers, namely 15 respondents or 75% with an asymp. Sig. value of 0.000 (<0.05). Referring to the results of the data analysis and research findings, it can be concluded that the effectiveness of nutmeg has an effect on diarrhea in toddlers.

Corresponding Author:
Wahidah
STIKes Sakinah Husada
WRM2+4XH, Jl. Anwar Idris, Bunga Tj., Kec. Datuk Bandar, Kota Tanjung Balai, Sumatera Utara
wahidahh@gmail.com

INTRODUCTION

Diarrheal disease is a major problem in developing countries, including Indonesia. Besides being a cause of death, diarrhea is also a major cause of malnutrition, which can lead to death and even lead to extraordinary events. Several factors contribute to diarrhea, including bacterial contamination of food and drink contaminated with feces and/or direct contact with infected individuals. Furthermore, the most dominant factors contributing to diarrhea are water, poor food hygiene, household latrines, and water (Melvani et al., 2019).

Diarrheal disease remains a global problem, with high morbidity and mortality rates in various countries, especially developing ones. It is also a major cause of high child morbidity and mortality worldwide. It is generally estimated that more than 10 million children under 5 years of age die annually worldwide, with approximately 20% of these deaths due to diarrheal infections (Hartati & Nurazila, 2018).

Diarrhea is a disease with signs of changes in the shape and consistency of stool, which is soft to liquid and increased frequency of defecation more than usual (3 times or more in 1 day), which is characterized by symptoms of dehydration, fever, nausea and vomiting, anorexia, weakness, paleness, abdominal keratin, sunken eyes, dry mucous membranes, decreased urine output, and so on. This disease is one of the diseases transmitted through water where clean water sources are still a top priority issue in the Pacific region, including Indonesia. Lack of clean water coverage is one of the factors in the occurrence of diarrhea (Dahyuniar, 2018). Diarrhea is more often experienced by children and is accompanied by symptoms of dehydration. There are several signs and symptoms when a child is dehydrated such as dizziness, dry mouth, dark yellow urine, small amounts of urine, weakness, and dry skin (Ronif, 2019).

According to WHO (2019), diarrhea is one of the diseases with the highest incidence and mortality rates worldwide. Approximately 1.7 trillion cases are reported annually. Diarrheal disease is the second leading cause of death in children under five, killing approximately 525,000 children annually. Diarrhea can last for several days and can deprive the body of the water and salts it needs to survive.

Based on the 2019 Indonesian Health Profile data, the prevalence of diarrhea based on health worker diagnosis was 6.8%, and based on health worker diagnosis or previous symptoms, it was 8%. The age groups with the highest prevalence of diarrhea (based on health worker diagnosis) were children 1-4 years old at 11.5% and infants at 9%. The lowest prevalence of diarrhea was in the Riau Islands Province at 5.1%, and the highest in North Sumatra Province at 14.2% (Ministry of Health of the Republic of Indonesia, 2020).

The high incidence of diarrhea is caused by various risk factors, including poor environmental sanitation, poor personal hygiene, poor food sanitation, nutritional and immune system problems, low levels of exclusive breastfeeding, early introduction of additional foods, and excessive stress (Melvani et al., 2019).

The main cause of death in diarrhea sufferers is a lack of fluids and electrolytes (dehydration) through soft to liquid stools, which, if left untreated, can result in the body being unable to function normally. There are three main elements in the management of diarrhea: rehydration fluids, zinc, and continued feeding (Hospital Care for Children, 2016). One of the most important maternal knowledge in preventing adverse outcomes from diarrhea is regarding the initial treatment of diarrhea in children. Initial treatment of diarrhea involves preventing and treating dehydration (Luthfiana, 2016).

Pharmacological treatment of diarrhea involves the use of thickening agents, such as kaolin, pectin, and bismuth, and by reducing water absorption in the intestines with gastrointestinal pore-shrinking agents or astringents. Non-pharmacological diarrhea treatment utilizes nutmeg. Nutmeg (Myristica fragrans Houtt) is a well-known traditional medicinal plant, offering significant benefits and high market value. All parts of the nutmeg plant possess extraordinary properties for humans. Nutmeg consists of the pulp, seeds (nuts), and mace. Nutmeg can be made into nutmeg oil, oleoresin, and volatile extracts. Nutmeg is a native spice plant of Maluku and has been traded and cultivated for generations on smallholder plantations throughout most of the Maluku Islands (Atmaja, 2017).

Medically, nutmeg is known to act as a stimulant and improve digestion. Nutmeg is carminative, good for treating digestive disorders (flatulent, nausea, and vomiting), an

astringent, reduces sweat odor, has narcotic effects, and is a potent aphrodisiac. Its antioxidant effects have been studied and used as an adjunct therapy for various ailments (Silalahi, 2018).

Based on the results of an initial survey conducted on 10 mothers with infants and toddlers, 50% of the 10 mothers gave diapet, 30% herbal medicine, and 20% applied baby oil. Most mothers were unaware of the benefits of nutmeg as an initial treatment for toddlers. Therefore, the researchers were interested in conducting a study entitled "The Effect of Nutmeg on Diarrhea in Toddlers Aged 1-5 Years at the Syahruddin Clinic."

METHODS

Types of research

This type of research uses a pre-experimental design, a research design that has not yet been categorized as a true experiment. Pre-experimental research uses a one-group pretest-posttest without control. The researcher first administers a pretest to the group that will receive the treatment. Then, the researcher administers the treatment. After the treatment is completed, the researcher administers a post-test. The effect of the treatment can then be accurately determined by comparing the pre-test and post-test results.

Population and Sample

The population in this study was all babies and toddlers aged 1-5 years who received health services at the Syahruddin clinic, totaling 20 people.

Sample

A sample is a portion of the entire object being studied and is considered representative of the entire population. The sample used in this study was 20 toddlers.

Sample Size

The sample size in the pre-experimental group was 20 people, which included criteria, where the criteria were toddlers aged 1-5 years with diarrhea.

Sampling Techniques

This research technique was taken using total sampling, namely the total population was used as a research sample.

Location and Time of Research

Research Location

This research was conducted at the Syahruddin Clinic, Tanjung Balai.

Research Time

The research period is the period during which the research was conducted. This research period lasted from the initial survey in September to completion in June 2022.

RESULTS AND DISCUSSION

Data Analysis

Based on the results of data collection carried out in September-June 2025 at the Syahruddin Clinic, a sample of 20 people was obtained with the following research results:

Univariate Analysis

The characteristics of respondents based on gender at Syahruddin's clinic are as follows:

Table 1. Frequency distribution of respondents based on gender

No	Gender	Frequency	Percentage
1	Man	9	45%
2	Woman	11	55%
Total		**20**	**100%**

Source: primary data, respondent questionnaires inSyahruddin Clinic

Based on table 1. the majority of respondents at Mutiara Kisaran Health Center were female, namely 11 respondents with a percentage of (55%) and 9 respondents were male with a percentage of (45%).

The characteristics of respondents based on gender at the Syahruddin clinic are as follows:

Table 2. Frequency distribution of respondents based on age.

No	Age	Frequency	Percentage
1	1 year	1	5%
2	2 years	5	25%
3	3 years	5	25%
4	4 years	6	30%

Source: primary data, respondent questionnairesSyahruddin Clinic

Based on table 4.2, the majority of respondents at Mutiara Health Center were aged 4 years at most, namely 6 respondents with a percentage of (30%) and the least aged 1 year was 1 respondent with a percentage of (5%).

Bivariate Analysis

Diarrhea in Toddlers Before Being Given Nutmeg

Respondent characteristics based on diarrhea in toddlers before being given nutmeg at the Syahruddin clinic are as follows:

Table 3. Characteristics of respondents before being given fruit at Syahruddin's clinic

No	CHAPTER	Frequency (f)	Percentage (%)
1	Normal (<3x a day)	0	0%
2	Diarrhea (>3x a day)	20	100%
Total		**20**	**100%**

Source: primary data, respondent questionnaire at Syahruddin clinic

Based on table 5.6 above, it shows that all respondents at the Syahruddin clinic had diarrhea (>3x a day), namely 20 respondents with a percentage of (100%).

Diarrhea in Babies After Being Given Nutmeg

Respondent characteristics based on diarrhea in toddlers after being given nutmeg at the Syahruddin clinic are as follows:

Table 4. Characteristics of respondents after being given nutmeg from the Syahruddin clinic

No	CHAPTER	Frequency (f)	Percentage (%)
1	Normal (<3x a day)	15	75%
2	Diarrhea (>3x a day)	5	25%
Total		**20**	**100%**

*Source: primary data, respondent questionnaires in*Syahruddin Clinic

Based on table 4. above, it shows that after being given nutmeg, the respondents at the Syahruddin clinic experienced a change in diarrhea frequency to normal, namely 15 respondents with a percentage of (75%).

The Effect of Giving Nutmeg on Diarrhea in Toddlers

Table 5. The effect of green grass jelly leaf decoction therapy on changes in blood pressure in hypertension sufferers.

CHAPTER	Frequency and Percentage			
	Pre	**%**	**Post**	**%**
Normal (<3 x a day)	0	0%	15	75%
Diarrhea (>3 x a day)	20	100%	5	25%
Total	20	100%	20	100%
P value	0,000		Z	-3,873

Source: primary data, respondent questionnaire at Mutiara Kisaran Community Health Center

Based on table 5.8 above, it shows that before being given grass jelly fruit, all respondents at the Syahruddin clinic had diarrhea problems (>3x a day), namely 20 respondents with a percentage of (100%), and those who had normal bowel movements (<3x a day) were 0 respondents with a percentage of (0%). After being given nutmeg fruit, diarrhea in respondents changed, namely the majority of respondents had bowel movements (<3x a day) as many as 15 respondents with a percentage of (75%), and those who had diarrhea (>3x a day) were 5 respondents with a percentage of (25%).

After conducting pre and post analysis using analysis, the results obtained showed a significant relationship with changes in the frequency of defecation in toddlers with diarrhea with a p value = 0.000 below <0.05, which means that there is an effect of nutmeg on the frequency of defecation in toddlers with diarrhea.

Discussion

Based on table 4.3 above, it shows that before being given nutmeg, 20 respondents at the Syahruddin clinic experienced diarrhea with a percentage of (100%).

This is in accordance with the theory according to Melvani et al., (2019) The cause of the high incidence of diarrhea is due to various risk factors, including poor environmental sanitation conditions, poor personal hygiene, poor food sanitation, nutritional problems and body immunity, low exclusive breastfeeding, providing additional food too early, and excessive stress. According to the researcher's assumption, it can be seen from the results above that the total number of respondents who experienced diarrhea at the Community Health Center was due to a lack of understanding on the part of mothers to pay attention to environmental conditions and eating utensils for babies which could be contaminated with bacteria or other things.

Based on table 4.4 above, it shows that after being given nutmeg, the respondents at the Syahruddin clinic had normal bowel movements, namely 15 respondents with a percentage of (75%). This aligns with Silalahi's (2018) theory that nutmeg is medically known to act as a stimulant and improve digestion. Nutmeg is carminative, good for treating digestive disorders (flatulent, nausea, and vomiting), an astringent, reduces sweat odor, has narcotic effects, and is a good aphrodisiac. Its antioxidant effects have been studied and used as an adjunct therapy for various diseases.

According to the researcher's assumption, it can be seen from the results above that after being given nutmeg, the majority of respondents' bowel movements returned to normal at the Syahruddin clinic because nutmeg contains a thickening agent that can treat diarrhea in babies.

CONCLUSION

Based on the data and results of the research that has been conducted, the following conclusions can be drawn. Diarrhea in toddlers before being given nutmeg, all of them experienced diarrhea with 20 respondents (100%). Diarrhea in toddlers after being given nutmeg fruit experienced a change in bowel movements to normal with 15 respondents (75%). The effectiveness of nutmeg fruit against diarrhea in toddlers aged 1-5 years at the Syahruddin clinic with a value of asim.sig = 0.000 which is less than 0.05.

REFERENCE

Andarini, Desheila. (2021) Implementation of Diarrhea Response Movement for Toddlers in Jejawi District, Komering Ilir Regency. Journal of Health Management of the Dr. Soetomo Hospital Foundation, 7(1), pp.9-18.

Anik, Maryunani. (2013). Pediatrics in Midwifery. East Jakarta: CV Trans Info Media

Klisat Region. Asria, Mery. (2020). Characteristics of Diarrhea in Toddlers at the Sudiang Community Health Center, Biringkanya District, January - December 2018. Thesis. Hasanuddin University

Dewi, et al. (2019). Midwifery Care for Complex Maternal and Neonatal Cases. Yogyakarta: PT. Pustaka Baru

Dewi, M. et al. (2020). The Relationship between Environmental Factors and the Incidence of Diarrhea in Toddlers in the Bati-Bati Community Health Center Work Area, Tanah Laut Regency. Journal of Diarrheal Incidence.6(1), pp. 1-5

Khoirunnisa, et al. (2019). Midwifery Care for Neonates, Infants, and Toddlers. Yogyakarta: Binapura Aksara

M, Sudarti. (2018). Disorders and Diseases in Infants and Children. Yogyakarta: Nuha Medika.

Saputra, Lyndon. (2020). Neonatal, Infant, and Toddler Care. Jakarta: Binapura Aksara

Selviana, Mega. (2019). Nursing Care for Children with Diarrhea in the Manyar Ward, Hospital. Health Journal, 10(1), pp. 1-9

Silalahi, Yosi. (2018). Nutmeg as a Promising Phytopharmaceutical in the Future. Molucca Medicca, 11(1), pp. 96-101.

Susanti, et al. (2019) The Benefits of Nutmeg as an Antisarcopenia. Yogyakarta: Deepublish

Teuku Hadi Wibowo Atmaja. (2017) The Effect of Ethanol Extract Concentration of Nutmeg Fruit (Myristica fragrans) on the Inhibitory Power of Sthaphyilococus Aureus. Jurnal Edubio Tropika, 5 (1), P.1.1

Theresia, A. (2020). Factors Associated with the Incidence of Diarrhea in Toddlers Aged 1-5 Years in 2020. Thesis. Health Polytechnic, Ministry of Health, Medan

Tuang, Agus. (2021). Analysis of Factors Associated with the Incidence of Diarrhea in Children. Sandi Husada Scientific Journal of Health, 10(2), pp 534-54