Jurnal Eduhealth
Volume 15, Number 04, 2024, DOI 10.54209/eduhealth.v15i04
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

# The Relationship Of Knowledge With The Incident Of Typhod Fever On Children At Dr.Fauziah Hospital Bireuen District In 2024

**Sitti Muthmainnah[1], Novianti[2], Asmaul husna[3], Putry Hendriyani[4]**
[1,3,4]STIKes Payung Negeri Aceh Darussalam, [2]Universitas Bumi Persada

**Article Info**
**Keywords:**
Knowledge,
Incidence of Typhoid Fever

**ABSTRACT**
Data from the Indonesian Health Profile in 2022 shows that 41,081 cases of typhoid and paratyphoid fever sufferers were hospitalized in hospitals with a death rate of 279 cases (Ministry of Health, 2022). Several factors play a role in the incidence of typhoid fever, including: environmental factors, knowledge, attitudes and actions. According to the Ministry of Health in 2022, feces disposal, clean water facilities, food sanitation, personal hygiene, the habit of snacking or eating outside the home, as well as a history of typhoid fever in the family is a factor that is thought to be involved in the incidence of typhoid fever. The population in this study were all children aged 5 to 14 years who were diagnosed with typhoid fever and treated in the pediatric ward from January to June 2024, totaling 67 cases. A sample is a part of a population that has certain characteristics or conditions to be studied. The sampling technique used in this research was Total Sampling, namely the entire population was used as a sample, namely 67 cases. This research is analytical with a cross sectional design with data processing methods using Editing, Coding, Tabulating and Entry. The results of the chi-square statistical test between knowledge and the incidence of Typhoid Fever in children obtained a p value (0.002) < α (0.05), meaning that H0 was rejected, and Ha, accepted, so it can be concluded that there is a relationship between knowledge and the incidence of Typhoid Fever. at Dr. Hospital. Fauziah. It is hoped that Dr. Fauziah Bireuen Regency As a measure to prevent typhoid fever in children, Dr. Hospital. Fauziah Bireuen Regency was advised to improve health education programs for parents about the importance of sanitation, food hygiene and vaccination.



**Corresponding Author:**
Sitti Muthmainnah
STIKes Payung Negeri Aceh Darussalam
sitti.mkm@gmail.com

## INTRODUCTION

Typhoid fever, a contagious bacterial disease, poses a serious challenge to global health. The main cause is the bacteria Salmonella typhi and often occurs in areas with poor sanitation and limited access to clean water. Symptoms include high fever, headache, nausea, vomiting, diarrhea and skin rash. This condition can be fatal without appropriate treatment, resulting in serious complications such as intestinal bleeding or life-threatening systemic infections. (WHO) recommends prevention through vaccination, good sanitation practices, and public education about the importance of personal and environmental hygiene. With fast and effective treatment, including correct diagnosis and appropriate treatment, it is possible to

Jurnal Eduhealth
Volume 15, Number 04, 2024, DOI 10.54209/eduhealth.v15i04
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

reduce the burden of this disease and prevent further spread, maintaining public health globally (WHO, 2022).

According to report data from WHO in 2021, acute infections caused by Salmonella enterica serotype typhi 2 can reach 21 million cases and the death rate can reach 128,000 to 161,000 each year, with the most cases being in Southeast Asia and South Asia. The mortality rate for typhoid fever can reach 10-30% if not treated properly and immediately, but can be reduced to 1-4% with appropriate treatment (WHO, 2021).

Typhoid fever in Indonesia is spread evenly across all provinces, with a difference of 358 cases per 100,000 population in rural areas and 760 cases per 100,000 population in urban areas each year. It is reported that 91% of typhoid fever sufferers in Indonesia range in age from 3-19 years (Ministry of Health, 2022). Data from the Indonesian Health Profile in 2022 shows that 41,081 cases of typhoid and paratyphoid fever sufferers were hospitalized in hospitals with a death rate of 279 cases (Ministry of Health, 2022). Several factors play a role in the incidence of typhoid fever, including: environmental factors, knowledge, attitudes and actions. According to the Ministry of Health in 2022, feces disposal, clean water facilities, food sanitation, personal hygiene, the habit of snacking or eating outside the home, as well as a history of typhoid fever in the family is a factor thought to be involved in the incidence of typhoid fever (Ministry of Health, 2022).

Based on the Health Profile of Aceh Province in 2021, the number of Typhoid Fever cases hospitalized was 8,507, in 2022 it decreased by 5,717 cases, and in 2023, Typhoid Fever cases increased again to 9,216 cases, meaning that the number of Typhoid Fever cases from year to year has increased. Fluctuations (Aceh Health Office, 2023). Based on the Bireuen District Health Profile in 2021, there were 750 cases of typhoid fever in Bireuen District, in 2022 there were 950 cases, in 2023 typhoid fever cases fell to 573 cases (Bireuen District Health Office, 2023).

Based on the results of data from an initial preliminary study at the Children's Outpatient Clinic, Dr. General Hospital. Fauziah, Bireuen Regency, there were 274 cases of typhoid fever in children in 2022. The increase occurred in the age range 5 to 14 years, and increased in 2023, there were 529 cases which experienced an increase in the same age range, while in January to April 2024 there was a decrease, namely there were 47 cases registered at home. the disease (RSU, Dr. Fauziah, 2024)

From the initial preliminary study that researchers conducted on April 25 2024 in the children's inpatient room at Dr. Hospital. Fauziah Bireuen Regency on 5 parents who experienced typhoid fever, that researchers received information from 2 parents who said that their living environment was unhygienic due to the parents' bad behavior, and they had been allowing their children to buy snacks who were unhealthy, and 3 parents said that regarding the condition of their child suffering from typhoid fever, they realized that this might occur due to a lack of knowledge as parents in maintaining the cleanliness and health of the living environment. And there were 2 parents who were interviewed who stated that their knowledge regarding hygiene and health was considered adequate, it is necessary to consider that other factors that are not under their control may play a role in forming environmental conditions that influence the possibility of children contracting typhoid fever.

Jurnal Eduhealth
Volume 15, Number 04, 2024, DOI 10.54209/eduhealth.v15i04
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

These possibilities include contamination of water or food from outside the home environment, exposure to infections from public facilities or school environments, or deficiencies in sanitation infrastructure that are not directly related to the household. In this context, researchers may be interested in investigating external factors that have the potential to cause illness in children, even though parents have adequate knowledge about the principles of health and hygiene at home (RSU dr.Fauziah, 2024)

## METHOD

Analytical research design with a cross sectional approach, namely an approach where data collection for the independent variable and dependent variable is collected at the same time or in a certain period. The population in this study were all children aged 5 to 14 years who were diagnosed with typhoid fever and treated in the pediatric ward from January to June 2024, totaling 67 cases. A sample is a part of a population that has certain characteristics or conditions to be studied. The sampling technique used in this research was Total Sampling, namely the entire population was used as a sample, namely 67 cases. The instrument in this research uses a questionnaire. Univariate analysis was carried out on each variable from the research results. This analysis only produces the distribution and presentation of each variable. The bivariate analysis used was the chi square technique using the SPSS version 20.0 program.

## RESULTS AND DISCUSSION

**Table 1** Relationship between knowledge and the incidence of typhoid fever in Children at Dr. Hospital. Fauziah, Bireuen Regency

| No | Pengetahuan | Kejadian Demam Tifoid | | | | Total | | P – value | α |
|---|---|---|---|---|---|---|---|---|---|
| | | Ya | | Tidak | | | | | |
| | | F | % | F | % | F | % | | |
| 1 | Baik | 12 | 17,9 | 11 | 16,4 | 23 | 34,3 | | |
| 2 | Cukup | 3 | 4,5 | 6 | 9,0 | 9 | 13,4 | | |
| 3 | Kurang | 28 | 41,8 | 7 | 10,4 | 35 | 52,2 | 0,002 | 0,05 |
| | Jumlah | 43 | 64,2 | 24 | 35,8 | 67 | 100,0 | | |

Based on table 1, it was found that the majority of knowledge was in the poor category, namely 35 people (52.2%), consisting of 28 people (41.8%) who experienced an incident of Typhoid Fever and 7 people (10.4%) who did not experience an incident. Typhoid Fever, while there were 23 people (34.3%) with good knowledge, of whom 12 people (17.9%) experienced Typhoid Fever and 11 people did not experience Typhoid Fever. (16.4%).

**Relationship between Knowledge and the Incidence of Typhoid Fever in Children**

Based on the research results, it was found that the majority of knowledge was in the poor category, namely 35 people (52.2%), consisting of 28 people (41.8%) who experienced an incident of Typhoid Fever and 7 people (10.4%) who did not experience an incident. Typhoid Fever, while there were 23 people (34.3%) with good knowledge, of whom 12

Jurnal Eduhealth
Volume 15, Number 04, 2024, DOI 10.54209/eduhealth.v15i04
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

people (17.9%) experienced Typhoid Fever and 11 people did not experience Typhoid Fever. (16.4%).

Research shows that the majority of respondents' knowledge is in the poor category, namely 35 people (52.2%). Of this number, 28 people (41.8%) experienced Typhoid Fever, while 7 people (10.4%) did not experience Typhoid Fever. This shows that a low level of knowledge is associated with a high incidence of Typhoid Fever. Low knowledge can lead to a lack of understanding about how to prevent disease, thereby increasing the risk of developing Typhoid Fever. Research shows that the majority of respondents' knowledge is in the poor category, namely 35 people (52.2%). Of this number, 28 people (41.8%) experienced Typhoid Fever, while 7 people (10.4%) did not experience Typhoid Fever. Good knowledge was possessed by 23 people (34.3%), of which 12 people (17.9%) had Typhoid Fever and 11 people (16.4%) did not have Typhoid Fever. This shows that a low level of knowledge is associated with a high incidence of Typhoid Fever, while good knowledge can help reduce the risk of developing the disease.

The results of the chi-square statistical test between knowledge and the incidence of Typhoid Fever in children obtained a p value (0.002) < α (0.05), meaning that H0 was rejected, and Ha, accepted, so it can be concluded that there is a relationship between knowledge and the incidence of Typhoid Fever. at Dr. Hospital. Fauziah Bireuen Regency in 2024.

Good knowledge about health is very important in preventing diseases, including typhoid fever in children. Parents who have a good understanding of the causes, symptoms and ways of transmitting typhoid fever will be better able to take preventive steps to protect their children. This knowledge includes the importance of maintaining personal hygiene, the environment, and the food and drink consumed. With adequate understanding, parents can be more alert and respond quickly to early signs of infection, so they can immediately take the necessary medical action.

Apart from that, knowledge also influences attitudes and behavior in preventing typhoid fever. Parents who understand the importance of vaccination and providing clean water will be more committed to protecting their children from this disease. They tend to avoid risky practices, such as consuming food or drinks that are not guaranteed to be clean. Thus, sufficient knowledge not only plays a role in preventing infection, but also in reducing the severity if a child is infected, because faster and more appropriate treatment can be carried out (Mubarak, 2022).

Adequate knowledge also plays a role in increasing awareness of the importance of access to appropriate health services. Parents who understand the risks and dangers of typhoid fever will be more proactive in seeking information and getting necessary medical care. They tend to consult health workers more often and comply with the recommendations given, such as following vaccination schedules and providing hygienic food to children. This contributes to the prevention of typhoid fever and minimizes the complications that can arise from the disease.

Furthermore, knowledge about typhoid fever helps in building an environment that supports the child's overall health. Parents who have good insight tend to educate other family members and the community about proper hygiene practices, such as washing hands

Jurnal Eduhealth
Volume 15, Number 04, 2024, DOI 10.54209/eduhealth.v15i04
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

with soap and ensuring good sanitation at home. This collective awareness creates an environment that is safer from disease, including typhoid fever, and indirectly contributes to reducing the incidence of disease in society. Thus, strong knowledge not only protects individuals, but also improves the health of society as a whole (Yaniza, 2023).

This research is in line with research by Meria, (2023) with the title "The Relationship Between Environmental Sanitation, Personal Hygiene, and Individual Characteristics with the Incidence of Typhoid Fever in the Working Area of the Kedung Mundu Community Health Center, Semarang City" with a P value = 0.002, meaning there is a significant relationship. Between knowledge and the incidence of Typhoid Fever in children. In the high category, 9 people (13.4%) experienced typhoid fever and 7 people (10.4%) did not experience it.

The majority of respondents were in the middle economic status category, namely 27 people (40.3%). Among them, 19 people (28.4%) experienced typhoid fever, while 8 people (11.9%) did not experience this infection. The reasons for this phenomenon could be related to factors such as limited access to health and hygiene facilities which may be more common in middle economic groups compared to higher economic groups. Although middle economic status can often provide adequate access to prevention, less than optimal environmental conditions and health awareness can still increase the risk of disease. Therefore, special attention is needed to increase awareness and prevention efforts in this economic group.

A total of 16 people (23.9%) had a high economic status. Among them, 9 people (13.4%) experienced typhoid fever, while 7 people (10.4%) did not experience infection. This shows that although high economic status is usually associated with better access to health facilities and better environmental conditions, the risk of typhoid fever still exists. Factors such as living habits, level of awareness of disease prevention, and perhaps unavoidable exposure still play a role. This underscores the importance of not just relying on economic status but also ensuring effective education and prevention efforts for all economic groups.

The results of the chi-square statistical test between economic status and the incidence of Typhoid Fever in children obtained a p value (0.001) < α (0.05), meaning that H0 was rejected, and Ha, accepted, so it can be concluded that there is a relationship between economic status and the incidence Typhoid Fever at Dr. Hospital. Fauziah Bireuen Regency in 2024.

Family economic status has a significant influence on the risk of Typhoid Fever in children. Families with better economic conditions tend to have easier access to clean water, adequate sanitation, and hygienic food, all of which are important factors in preventing the transmission of this disease. In addition, families with higher financial capabilities are also able to provide faster and more effective health services, such as vaccinations and routine check-ups, which can reduce the possibility of children being infected. On the other hand, families with limited economic conditions often face difficulties in meeting these basic needs, so that children become more vulnerable to exposure to the bacteria that cause Typhoid Fever. The inability to access good health facilities also increases the risk of serious complications if the disease is not treated immediately. Thus, economic status has an important role in determining the incidence of Typhoid Fever in children (Zahra, 2022).

Jurnal Eduhealth
Volume 15, Number 04, 2024, DOI 10.54209/eduhealth.v15i04
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

This research is also in line with Zahra's research (2022) with the title "The Relationship between Knowledge and Economic Status and the Incidence of Typhoid Fever in Children at the Bebesan Community Health Center, Central Aceh Regency," obtained a P value = value 0.001, meaning there is a significant relationship between economic status and the incidence of Typhoid Fever in child.

## CONCLUTION

Based on the results of research and discussion regarding the relationship between level of knowledge and the incidence of Typhoid Fever in children at Dr. General Hospital. Fauziah, Bireuen Regency in 2024, with the results that there was a relationship between knowledge and the incidence of Typhoid Fever in children, it was obtained that the p value was (0.002) < α (0.05), meaning that H0 was rejected and Ha was accepted.

## REFERENCES

Azhari, A (2020). *Faktor Risiko Demam Tifoid pada Anak Usia Sekolah*. Bandung: Pustaka Medika.

Basuki (2021). *Demam Tifoid: Panduan Diagnosis dan Pengobatan.* Penerbit Kedokteran Media Utama

Dinkes Aceh (2023). *Profil Kesehatan Provinsi Aceh Tahun 2023.* Banda Aceh: Dinas Kesehatan Provinsi Aceh.

Dinkes Kab Bireuen (2023). *Profil Kesehatan Kabupaten Bireuen Tahun 2023.* Bireuen: Dinas Kesehatan Kabupaten Bireuen.

Kementerian Kesehatan Republik Indonesia (Kemenkes). (2022). *Profil Kesehatan Indonesia 2022.* Jakarta: Kementerian Kesehatan RI.

Mahfud, M (2022). *Patogenesis dan Respon Imun pada Infeksi Salmonella Typhi.* Surabaya: Universitas Airlangga Press.

Mark, A., et al (2022). *Influence of Maternal Lifestyle and Attitude on Typhoid Fever Risk in Children*. Journal of Infectious Diseases, 15(3), 150-162.

Meria, M (2023). *Hubungan Antara Sanitasi Lingkungan, Higiene Perorangan, Dan Karakteristik Individu Dengan Kejadian Demam Tifoid* Di Wilayah Kerja Puskesmas Kedungmundu Kota Semarang, 152. Retrieved from https://lib.unnes.ac.id/18354/

Miftah. (2020). *Karakteristik Penderita Demam Tifoid* di RS. Ibnu Sina Kota Makassar. UMI *Medical Journal*, 5(1), 57–68. https://doi.org/10.33096/umj.v5i1.81

Mubarak (2022). *Pengetahuan dan Pengalaman: Teori dan Aplikasi dalam Kehidupan Sehari-hari.* Penerbit Rajawali Pers.

Mulyana. (2021). *Psikologi Sosial: Teori dan Aplikasi.* Penerbit Rosdakarya.

Notoatmodjo (2021). *Dasar-Dasar Pengetahuan Manusia: Pengertian, Sumber, dan Pembentukan.* Penerbit Raja Grafindo Persada.

Rumah Sakit dr. Fauziah (2023). *Profil Rumah Sakit Fauziah Kabupaten Bireuen Tahun 2024.*

*World Health Organization* (WHO). (2020). *Typhoid and Paratyphoid Fevers*. Retrieved from WHO website

Jurnal Eduhealth
Volume 15, Number 04, 2024, DOI 10.54209/eduhealth.v15i04
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

Yaniza (2023) .Hubungan Tingkat Pengetahuan dan Sikap dengan Kejadian Demam Tifoid Pada Anak di Rumah Sakit Umum Zainal Abidin Provinsi Aceh". *Jurnal :Epidemiologi*

Zahra (2022), Hubungan Pengetahuan dan Status ekonomi dengan Kejadian Demam Tifoid Pada Anak di Puskesmas Bebesan Kabupaten Aceh Tengah. *Jurnal :Ilmu Keperawatan*