THE INFLUENCE OF BOOKLET MEDIA ON MOTHERS OF TODDLERS REGARDING IMMUNIZATION

Dewi Afrida [1], *Mesrida Simarmata* [2]

[1] Undergraduate Program , Mitra Husada Health College, Medan , Medan , Indonesia

Correspondence address: Jl. Water Gate Psr VIII, Simp Kwala Bekala Subdistrict, Medan Johor District, Medan, North Sumatra 20142
Medan, Indonesia
Email: mesridasimarmata@gmail.com

Abstract

Introduction : Infant mortality rate is still high, one of which is caused by infectious diseases. These infectious diseases can be prevented by immunization. Immunization can prevent babies from Tuberculosis (TB), Diphtheria, Tetanus, Hepatitis B, Pertussis, Measles, and Polio . **Purpose** : Effect Media *Booklet* on Knowledge and Attitude of Mothers of Toddlers about Complete Immunization . **Population and Sample:** mothers who have toddlers aged 18-24 years at Rini Clinic as many as 40 people with total population sampling technique, the number of samples is 40 people. **Place and time:** at the Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province on month May – June 2024. **Results** : The majority of respondents aged 20-35 years were 24 people (60 %), the majority of high school/equivalent education was 36 people (65 people), the majority of housewives were 23 people (58%), the majority of multigravida were 25 people (63%) . The mean score of knowledge before education was 53.38 and after education was 77.00. The attitude score before booklet media education was 15-25 and after the min-max was 22-29. From the *Paired T Test* The *P* value was found to be 0.000 < 0.05, so Ha was accepted, namely that there was a relationship between knowledge and attitudes before and after *booklet media education* for pregnant women and mothers of toddlers. About Basic Immunization Before administration at the Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024. **Conclusion** : There is a relationship between knowledge and attitudes of mothers of toddlers before and after *booklet* media education About Basic Immunization at Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024 .

Keywords: Knowledge, Attitude, Mother of Toddler, Booklet, Immunization

INTRODUCTION

The infant mortality rate is still high, one of which is caused by infectious diseases. This infectious disease can be prevented by immunization. In reality, 1 in 10 babies are not found to have complete basic immunization. In Permenkes No. 25 of 2014 concerning services for infants, toddlers and pre-school children, exclusive breastfeeding, complementary feeding and basic and advanced immunization are provided (Ministry of Health of the Republic of Indonesia., 2023) . Advances in science have discovered vaccines, namely weakened germs that will be injected into the body through immunization. When the vaccine is inserted into the body with resistance from the body's antibodies to the antigens in the vaccine and producing new antibodies according to the antigens in the vaccine, immunization is an effort to increase immunity. Immunization is a way to prevent infectious diseases. The

immunization program aims to reduce the incidence of disease and reduce deaths that can be prevented by immunization (IP3I), namely tetanus , whooping cough (*pertussis*), *measles , hepatitis, polio and tuberculosis* (Darmin et al., 2023) .

Immunization consists of basic immunization and advanced immunization. Some PD3I infectious diseases that attack children aged 0-11 months are Tuberculosis (TB), Diphtheria, Tetanus, Hepatitis B, Pertussis, Measles, and Polio. There are several factors that influence the achievement of this immunization program, namely education, knowledge, maternal attitudes, and maternal beliefs. According to Hudhah and Hidajah in Surabaya, there is an influence of knowledge, attitudes and maternal beliefs on the achievement of the basic immunization program. Not all mothers can believe that this immunization has a good impact on their children (Hudhah & Hidajah, 2018) . According to Febri et al. in 2023, there is a relationship between knowledge and family support for the completeness of basic immunization (Sari et al., 2024) .

According to *the World Health Organization* (WHO), 1.5 million infant deaths occur annually due to infectious diseases that can be prevented by immunization. Less than 20 million children do not receive immunization. This immunization program is interconnected from hospitals to health centers, but many health centers have not yet reached the immunization coverage target (Islam et al., 2022) . Complete basic immunization coverage is only 74.5% while the target should be 95% (Simamora Lasria, Adek Hotnida Sari, Masintan Juliana Sibarani, 2023) . According to the Central Statistics Agency in 2022, immunization coverage for BCG was 79.17%, DPT/HB 78.73%, Measles 84.6%, Polio 4 was 81.13% and HB 0 was 20.46%. The target for achieving complete basic immunization is 95% (Directorate General of Disease Prevention and Control (P2P), 2022) . Many other provinces and districts have not achieved it, especially during the *Covid-19 situation* . It has now started to increase but the target has not been achieved (Stefanus Gardino Setyo D et al., 2023) . In 2023, the target for achieving basic immunization coverage is 100%, but immunization coverage is still 83.5%.

From the results of Simamora's research in Medan, there is a relationship between maternal knowledge and the provision of basic immunizations for infants (Simamora Lasria, Adek Hotnida Sari, Masintan Juliana Sibarani, 2023) . 85.41% while in 2018 it decreased to 72.76%. However in 2019 there was an increase of 73.74%. Regency or the city that has reached 80% IDL but this figure has not reached the target set as big as 95% (Ministry of Health of the Republic of Indonesia, 2019). There are several things that happen in society that result in rejection of mothers who have babies who refuse to be immunized, such as the results of Siswanto's 2020 study in Central Java, namely: the perception of not being susceptible to diseases that are not immunized, diseases that are not immunized are not dangerous, immunization has no benefits, immunization is detrimental, there is no signal to support their children for immunization (Siswanto et al., 2020) . Safitri said from Riau that

there is a relationship between low immunization coverage due to lack of knowledge and the issue of fake vaccines. This states that there are many negative rumors about immunization in the community that can affect mothers, babies and toddlers and people in their environment (Safitri et al., 2017) . According to Zafirah in 2021 in Surabaya, there are several factors that can influence the knowledge and attitudes of mothers in providing complete child immunization, such as the knowledge and information obtained (Zafirah, 2021) .

From the results of a survey at the Rini Midwife Clinic in Sunggal District, Medan City, it was found that out of 10 mothers with toddlers, 4 were not fully immunized for various reasons such as not wanting to, being afraid, not knowing the benefits of immunization.

Based on background behind on, so writer interested For do study with title "Influence Media *Booklet* on the Knowledge and Attitude of Mothers of Toddlers regarding the provision of complete immunization at the Rini Clinic, Sunggal District, Medan City, North Sumatra Province in 2024".

METHOD

This type of research is quantitative research using the method . *Pre- Experiment.* The research design used *a One Group Pre-test* and *post-test design. test.* This design compares the results from before treatment to after treatment. The population of this study was mothers who had toddlers at the Rini Clinic as many as 40 people with a total sampling method, so the number of samples in this study was 40 mothers of toddlers. Time : May to June 2024. Place: at the Rini Midwife Clinic, Sunggal District, Medan City North Sumatra Province in 2024 . *Univariate* data analysis , namely respondent characteristics using frequency distribution and *bivariate analysis* to measure the *mean difference before and after treatment, then a Paired T-* test was conducted to determine the *mean difference in* knowledge and attitudes of mothers of toddlers regarding the completeness of basic immunization.

RESULT AND DISCUSSION

The characteristics of the respondents are as follows, as seen in tables 1 , 2, 3.

Table 1 Frequency Distribution of Characteristics of Mothers of Toddlers at Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024

No	Characteristics	Frequency	%
	Age		
1	20-35 year	2 4	60
2	>35 year	16	40
	Total	40	**100**
	Education Mother		
2	JUNIOR HIGH SCHOOL	14	35
3	High school/equivalent	26	65
	Total	40	**100**
	Work		
1	Housewife	2 3	58
2	Farmer	17	42

	Total	40	**100**
	Parity		
1	Primigravida	15 37	
2	Multigravida	25 63	
	Total	**40**	**100.0**

Primary data :2024

From table 4.1, it can be seen that the majority of respondents aged 20-35 years were 24 people (60 %), the majority had a high school/equivalent education of 26 people (65 people), the majority were housewives of 23 people (58%), and the majority were multigravida of 25 people (63%).

Table 2. Frequency Distribution of Knowledge of Mothers *of* Toddlers About Complete Basic Immunization Before Media **Education Booklet at Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024**

Score	**Frequency**	**%**
30	1	3
35	3	8
40	7	1 8
45	8	20
50	5	13
55	1	3
6 0	2	5
65	7	1 8
7 0	4	10
75	2	5
Total	**40**	**100**

lowest knowledge score before being given booklet media education was 30 for 1 person (3 %) and the maximum score was 75 for 2 people (5 %), so the minimum-max knowledge score before education was 30-75.

Table 3. Frequency Distribution *of* Knowledge of Mothers of Toddlers About Basic Immunization After Education Media **Booklet at Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024**

Score	**Frequency**	**%**
60	3	8
65	5	13
70	11	28
75	11	28
80	4	10
85	2	5
90	3	8

95	1	3
Total	**40**	**100**

From table 3 it can be seen that the knowledge score after being given booklet media education had the lowest score of 60 for 3 people (5%) and the knowledge score after the maximum was 9.5 for 1 person (3%) , so the knowledge score after booklet media education was min-max 60-95.

Table 4. Frequency Distribution of Attitudes of Mothers of Toddlers About Basic Immunization Before Media Booklet **Education at Rini Midwife Clinic , Sunggal District, Medan City, North Sumatra Province in 2024**

Score	**Frequency**	**%**
15	2	5
16	3	8
17	6	15
18	7	18
19	8	20
20	5	13
21	5	13
22	3	8
25	1	3
Total	**40**	**100**

From table 4.4 it can be seen that the attitude score before being given booklet media education, the lowest score was 15 for 2 people (5%) and the maximum score was 25 for 25 people (3%), while the highest score obtained by the majority of respondents was 19 people (20%) , so the attitude score before booklet media education was 15-25

Table 5. Frequency Distribution of Attitudes of Mothers *of* Toddlers Regarding Basic Immunization After Education Media **Booklet at Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024**

Score	**Frequency**	**%**
22	7	18
23	5	13
24	8	20
25	6	15
26	8	2 0
27	3	8
28	2	5
29	1	3
Total	**40**	**100**

From table 4.5 it can be seen that the attitude score after being given *booklet media education* had the lowest score of 22 with 7 people (5%) and the maximum score was 29 with 1 person (3%), while the scores most frequently obtained by respondents were 24, 26, 27 with 8 people each (20% each) , so the attitude score after booklet media education was min-max 22-29.

2. Analysis Bivariate

The bivariate analysis was to determine whether there was a difference between the knowledge and attitude scores of pregnant women after providing education to mothers of toddlers about complete basic immunization.

Table 6. Differences in Knowledge of Pregnant Women Before and After Education Media *Booklet* for Pregnant Women About

Knowledge	**N**	**Mean**	***P. Value***
Before education Media *booklet*	40	53.38	0.000
After education Media *booklet*	40	77.00	

Based on table 4.6 It can be seen that there is a difference in the knowledge score of pregnant women before and after being given education with booklet media about immunization for mothers of toddlers that before education was carried out, the mean before education was 53.38 and the mean knowledge score after education was 77.00. From the *Paired T Test difference test* , it was found that the significance value with a probability of 0.000 <0.05, so Ha was accepted, namely there was a relationship between knowledge before and after *booklet media education* for mothers of toddlers about Basic Immunization Before being given at the Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024

Table 7. Differences in the Attitude of Pregnant Women Before and After Education Education Media *Booklet* for Mothers of Toddlers About Basic Immunization Before administration at the Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024

Attitude	**N**	**Mean**	***P. Value***
Bookleat Media education	40	18.85	0.000
After Education Media *Booklet*	40	24.63	

Based on table 4.6 It can be seen that there is a difference in the attitude of mothers of toddlers before and after being given education with *booklet media* about complete immunization for pregnant women that before the education was carried out, the mean before education was 18.85 and the mean knowledge score after education was 24.63. From the *Paired T Test* difference test , it was found that the significance value with a probability of 0.000 <0.05, so Ha was accepted, namely there was a relationship between the attitudes of pregnant women before and after

media education. *booklet* for mothers of toddlers about complete basic immunization, Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024

DISCUSSION

Based on table 4.6 it can be seen that there is a difference in the knowledge score of pregnant women before and after being given education with booklet media about immunization for mothers of toddlers that before education was carried out the mean before education was 53.38 and the mean knowledge score after education was 77.00. From the *Paired T Test difference test* , it was found that the significance value with a probability of 0.000 <0.05, so Ha was accepted, namely there was a relationship between knowledge before and after *booklet media education* for mothers of toddlers about Basic Immunization Before being given at the Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024.

Based on table 4.7, there is a difference in the attitude of mothers of toddlers before and after being given education with *booklet media* about complete immunization for pregnant women that before the education was carried out, the mean before education was 18.85 and the mean knowledge score after education was 24.63. From the *Paired T Test* difference test , it was found that the significance value with a probability of 0.000 <0.05, so Ha was accepted, namely there was a relationship between the attitudes of pregnant women before and after media education. *booklet* for mothers of toddlers about complete basic immunization, Rini Midwife Clinic, Sunggal District, Medan City, North Sumatra Province in 2024

According to Wulandari et al., in 2023, there is a relationship between knowledge and mother's attitude in achieving complete basic immunization, because with positive knowledge and attitude, mothers will take the initiative independently to bring their children for complete basic immunization (RetWulandari et al., 2023) . According to Sari et al. in 2023 in Mandailing Natal, it was also stated that there is a relationship between good maternal knowledge and increasing the achievement of complete basic immunization (Simamora Lasria, Adek Hotnida Sari, Masintan Juliana Sibarani, 2023) . So it is important to make efforts to improve the knowledge of mothers of toddlers, because many factors become obstacles in providing complete immunization such as negative perceptions, families who are less supportive and others (Siswanto et al., 2020) .

According to Rawar et al. in 2021, providing education to mothers of toddlers using media can make it easier for mothers to learn about immunizations such as vaccines, preventable diseases and the right age for immunization (Rawar et al., 2021) .

Researchers assume that by providing education with Bookleat media, mothers of toddlers can use several senses to remember and understand the importance of complete basic immunization so that the mother's knowledge is better and the mother's attitude is more positive. Mothers will remain motivated so that their children get complete basic immunization .

CONCLUSION AND SUGGESTION

The conclusion of this study is that there is a relationship between education about complete basic immunization with the use of booklet media to increase knowledge and improve mothers' attitudes because booklet media can

provide mothers with repeated understanding of information about complete basic immunization . It is recommended that this booklet media be used as a medium at the Rini clinic to improve the knowledge and attitudes of mothers of toddlers in achieving the target of complete basic immunization.

ACKNOWLEDGEMENT

We would like to thank STIKes Mitra Husada Medan for facilitating the implementation of this research, we would also like to thank Klinik Rini Kecamatan Sunggal Kota Medan Provinsi Sumatera Utara Tahun 2024 for being willing to be the research location, and we would like to thank all the mothers who have become respondents in this research and we would like to thank all parties involved in this research

REFERENCE

Aprilia, D., & Tono, S. F. N. (2023). Pengaruh Status Imunisasi Dasar Terhadap Kejadian Stunting Dan Gangguan Perkembangan Balita. *Jurnal Kebidanan*, *12*(1), 66–74. https://doi.org/10.47560/keb.v12i1.496

Dahlan, S. (2015). *Statistics for Medicine and Health* (6th ed.). Indonesian Epidemiology.

Darmin, Rumaf, F., Ningsih, SR, Mongilong, R., Goma, MAD, & Anggaria, A. Della. (2023). The Importance of Complete Basic Immunization in Infants and Toddlers. *Mapalus Community Service Journal* , *1* (2), 15–21.

Dewi, SK, & Sudaryanto, A. (2020). Validity and Reliability of the Questionnaire of Knowledge, Attitude and Behavior of Dengue Fever Prevention. *National Nursing Seminar of Muhammadiyah University of Surakarta (SEMNASKEP) 2020* , 73–79.

Directorate General of Disease Prevention and Control (P2P). (2022). Practical Guidelines for Immunization Program Management in Health Centers. *Ministry of Health of the Republic of Indonesia* , 1–64. https://dinkes.lebakkab.go.id/public/deploy/pdf/1659690641_10cc51aa9b567ad917d1.pdf

Herlina, N., Anggunan, Pinilh, A., & Nursiha, M. (2023). *THE RELATIONSHIP BETWEEN MOTHER'S EMPLOYMENT STATUS AND THE COMPLETENESS OF FOLLOW-UP IMMUNIZATION OF CHILDREN AGED 18–24 MONTHS IN THE WORK AREA OF RAJABASA INDAH COMMUNITY HEALTH CENTER* . *10* (6), 2135–2141.

Hudhah, MH, & Hidajah, AC (2018). Mother's Behavior in Complete Basic Immunization at Gayam Health Center, Sumenep Regency. *PROMKES Journal* , *5* (2), 167. https://doi.org/10.20473/jpk.v5.i2.2017.167-180

Islam, N., Ella Andayanie, & Andi Surahman Batara. (2022). Overview of the Complete Basic Immunization Program Implementation System for Infants at the Pangkajene and Kepulauan Regency Health Center. *Window of Public Health Journal* , *3* (5), 954–961. https://doi.org/10.33096/woph.v3i5.168

Jannah, BP and L. Miftahul. (2016). Quantitative Research Methodology. In *PT Rajagrafindo Persada* (Vol. 3, Issue 2).

Kahlon, G., Waheed, F., & Owens, M. T. (2022). What College Biology Students Know about How Vaccines Work. *CBE Life Sciences Education* , *21* (4), 1–20. https://doi.org/10.1187/cbe.20-12-0294

Ministry of Health, Republic of Indonesia (2017). Regulation of the Minister of Health of the Republic of Indonesia No. 12 of 2017

concerning the Implementation of Immunization. *Ministry of Health of the Republic of Indonesia* , 6–18.

Ministry of Health of the Republic of Indonesia. (2023). *Indonesian Health Profile 2022.* https://kemkes.go.id/id/profil-kesehatan-indonesia-2022

Mardhiati, R. (2022). Knowledge Variables in Public Health Research. *IKRA-ITH HUMANIORA: Journal of Social and Humanities* , *7* (1), 163–171. https://doi.org/10.37817/ikraith-humaniora.v7i1.2286

Rachmawati, F. (2023). Benefits of Immunization for Infants and Toddlers in Sindang Agung Village, Tanjung Raja District, North Lampung Regency in 2023. *Perak Malahayati Journal: Community Service* , *5* (2), 263–269. https://doi.org/10.33024/jpm.v5i2.12666

Rawar, EA, Kristariyanto, YA, & Atmaja, SP (2021). Health Education on Vaccination in Preventing Viral Infectious Diseases to Bintaran Residents, Yogyakarta. *Journal of Community Service: Health* , *1* (1), 1–8.

RetWulandari, RAW, Sukarni, D., & Silaban, TDS (2023). The Relationship Between Knowledge, Attitude and Husband's Support with Complete Basic Immunization in Infants. *Jurnal 'Aisyiyah Palembang* , *Volume 8*, (February 2023), 157–172.

Ridwan, M., Syukri, A., & Badarussyamsi, B. (2021). Analytical Study of the Meaning of Knowledge and Science and Its Types and Sources. *Geuthèë Journal: Multidisciplinary Research* , *4* (1), 31. https://doi.org/10.52626/jg.v4i1.96

Safitri, DM, Amir, Y., & Woferst, R. (2017). Factors Associated with Low Coverage in Providing Complete Basic Immunization to Children. *Jurnal Ners Indonesia* , *8* (1), 23–32.

Sari, FI, Ciselia, D., & Afrika, E. (2024). Factors Affecting the Provision of Complete Basic Immunization to Infants at the Srikaton Health Center in 2023. *SCIENTIFIC JOURNAL OF OBSGIN: Scientific Journal of Obstetrics & Gynecology P-ISSN: 1979-3340 e-ISSN: 2685-7987* , *16* (1), 63–71. https://stikes-nhm.e-journal.id/JOB/article/view/1554

Sastroasmoro, S., & Ismael, S. (2013). *Basics of Clinical Research Methodology* (4th ed.). Sagung Seto.

Simamora Lasria, Adek Hotnida Sari, Masintan Juliana Sibarani, PH (2023). The Relationship Between Mother's Knowledge and the Provision of Basic Immunization to Infants in the Working Area of Mompang Health Center, Mandailing Natal Regency. *Scientific Journal of Midwifery* , *3* (June 2022), 93–98.

Siswanto, E., Margawati, A., & Suryoputro, A. (2020). Factors Influencing Rejection of Infant and Toddler Immunization in the Sedulur Sikep (Samin) Community. *Jurnal Litbang: Media Informasi Penelitian, Pengembangan Dan IPTEK* , *16* (1), 1–14. https://doi.org/10.33658/jl.v16i1.190

Stefanus Gardino Setyo D, Yohanes Firmansyah, & Murni L Naibaho. (2023). Overview of Basic and Advanced Immunization Achievements Before, During and During the Transition of the COVID-19 Pandemic in the Cempaka Putih District Health Center Area. *Journal of Health Science Cluster Research* , *2* (1), 26–41. https://doi.org/10.55606/jurrikes.v2i1.817

Sukarini, LP (2018). Relationship between Knowledge and Attitude of Pregnant Women About Kia Book. *Genta Midwifery Journal* , *6*

(2). https://doi.org/10.36049/jgk.v6i2.95

Suzana, D., Melina, C., Endrasti, GA, Ninia, KE, & Qothoni, WB (2022). Mechanism of Action of mRNA Vaccine to Increase Body Immunity Against SARS-CoV-2 Virus. *Journal of Citizenship* , *6* (2), 4114–4130.

Ulsafitri, Y., & Yani, SE (2023). The Importance of Immunization for Babies and Toddlers in Jorong Kapalo Koto Sungai Pua, Agam Regency. *ALtafani : Abdimas Journal* , *1* (1), 1–05. https://journal.umnyarsi.ac.id/index.php/ABDIMAS

Zafirah, F. (2021). Factors Influencing the Lack of Complete Basic Immunization Coverage in Infants Aged 29 Days – 11 Months in the Jaddih Health Center Work Area, Bangkalan Regency. *Cerdika: Indonesian Scientific Journal* , *1* (4), 341–348. https://doi.org/10.59141/cerdika.v1i4.59