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THE RELATIONSHIP OF MOTHER'S KNOWLEDGE AND ATTITUDE REGARDING THE PROGRAM PCV IMMUNIZATION WITH PCV IMMUNIZATION STATUS IN INFANTS AT PAMANDEGAN HEALTH CENTER

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Abstract

Background: Efforts that can be made to prevent pneumonia include the use of the Pneumococcal Conjugate Vaccine (PCV). Based on the results of interviews at thePANandegan Community Health Center, it was found that 7 out of 10 mothers did not know about PCV immunization and the benefits of this immunization. The aimof this research is to determine the relationship between mothers' knowledge and attitudes about the PCV immunization program with the PCV immunization status of babies in thePANandegan Community Health Center working area. Research MethodsThe method used in this research is quantitative with an observational approach. The research design used in this research is cross sectional. The population required in this study is the community in the working area of the Uncle Health Center, with a total of 10 people. In this study, researchers took a sample of 100 respondents. Sample collection in this study applied a purposive sampling technique. Research ResultsThe research results show that there is a relationship between mother's knowledge and attitudes about the PCV immunization program with PCV immunization status with a significant value of 0.002. The conclusions and suggestionsof this research can be used as a source of reference and sufficient understanding to improve the service capacity of thePANandegan Community Health Center.

Keywords: Attitude, Immunization, Knowledge, Pneumococcal Conjugate Vaccine (PVC)

Introduction

Pneumonia is a disease that attacks the respiratory organs, especially the lungs. This disease is generally caused by bacteria such as Streptococcus pneumoniae, Haemophilus influenzae type b, while the virus that causes pneumonia is respiratory syncytial virus. Cases of this disease can affect various age categories, but the majority of the mortality rate for this disease occurs in infants and toddlers. Children under two years of age have a higher risk of contracting this disease compared to older children (WHO, 2019). Based on data from the Indonesian Ministry of Health as of April 2023, pneumonia cases are in the 10th category of diseases with the highest number of cases in Indonesia. This disease is classified as an acute disease because it carries the risk of inflammation of the alveoli in one or both lungs. In 2021, the mortality rate due to under-five pneumonia cases will be 0.16 out of 25 million baby births. Facts in the field are that the mortality rate for pneumonia in babies is twice as high as in children aged 1-4 years (Ministry of Health of the Republic of Indonesia, 2022).

The government has taken various steps to reduce the level of mortality and morbidity due to pneumonia in children, but the incidence of pneumonia is still quite high in Indonesia. Steps that can be taken to prevent pneumonia cases include giving exclusive breast milk, routinely carrying out basic immunizations, consuming supplements containing zinc, Integrated Management of Sick Toddlers (MTBS) and surveillance of pneumonia case detection. Apart from that, there is one effort that can be

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made to prevent pneumonia, namely the use of the Pneumococcal Conjugate Vaccine (PCV). The PCV vaccine is considered to have an extra level of protection and is effective in children (Saputri et al., 2020). The aim of administering the PCV vaccine is as a preventive measure to reduce the mortality rate due to pneumonia (Ministry of Health of the Republic of Indonesia, 2022). Research by Izurieta et al (2018) states that the incidence of pneumonia has been shown to decrease significantly in all countries in children under five who have implemented routine PCV immunization.

According to data collected by the Indonesian Ministry of Health, the achievement of Complete Basic Immunization (IDL) in eleven Indonesian provinces in 2022 is still below the national target of 90%. The eleven provinces in question are West Sulawesi, Southeast Sulawesi, Maluku, East Nusa Tenggara, North Kalimantan, Riau, West Kalimantan, West Papua, West Sumatra, Papua and Aceh. Likewise, for Complete Baduta Immunization (IBL), there are still 17 provinces in Indonesia that are still below the national immunization target, with the 3 lowest achievements being West Sumatra, Papua and Aceh (Ministry of Health, 2023). Meanwhile, according to data from the Lebak District Health Service, complete basic immunization coverage in 2022 is 95.3%

There are several reasons why mothers do not make routine immunization visits, including the fact that parents are too busy with their work so they do not have time to carry out immunizations and low knowledge regarding immunizations. Knowledge about knowledge about immunization causes mothers not to know the importance of carrying out immunizations for children and the consequences in the future (Arifin, 2018).

A mother's contribution in bringing her child to immunization is very important, because mothers generally have the main responsibility in caring for and caring for children. Therefore, it is important to pay attention to maternal education and knowledge in caring for and educating children. A mother's education and knowledge determine the ease of absorbing every update to educate and care for children in the future. The higher the mother's education, the easier it is for the mother to absorb information related to changes in environmental conditions, thus the mother will be able to adapt more easily to any changes (Chintia, 2021).

This research is supported by previous research conducted by Saputri (2020) which stated that public knowledge regarding the incidence of pneumonia and the PCV vaccine was considered good, but there were still many participants who answered incorrectly on the point that PCV immunization was included in the national child immunization category. A study conducted by Hasanah (2021) states that there is a correlation between maternal knowledge and the implementation of complete basic immunization for babies and toddlers in the Pamandegan Community Health Center working area. According to researchers, maternal compliance is greatly influenced by the mother's knowledge in providing immunizations. Apart from that, according to a study conducted by Putri (2022), the results showed that 75.8% of mothers did not provide basic immunization. There is a relationship between mother's knowledge and attitudes towards providing basic immunization during the Covid-19 pandemic with a sig value. 0,000.

Based on data obtained from a preliminary study, PCV1 immunization coverage in Lebak Regency was 65.8% and PCV2 was 54.86%, meanwhile PCV1 and PCV2 immunization coverage in the Pamandegan Health Center working area was 115 and 77 per 407 live births. This data is also supported by the results of direct interviews with 10 mothers who underwent immunization at the Pamandegan Community Health Center. From the results of the interviews it was found that 7 out of 10 mothers did not know about PCV immunization and the benefits of this immunization. Meanwhile, 3 of them already knew about PCV immunization and its benefits. Apart from that, of the 10 respondents, 6 of them still had a negative attitude towards providing PCV immunization. Based on several facts and phenomena, researchers are interested in conducting research on the relationship between maternal knowledge about the PCV immunization program and the PCV immunization status of babies in the Pamdengan Community Health Center working area.

Research Methods

The method used in this research is quantitative with an observational approach. This study aims to determine the relationship between maternal knowledge about the PCV immunization program and the PCV immunization status of babies in the Pamdengan Community Health Center working area. The research design used in this research is cross sectional. In cross-sectional research, researchers only apply one observation and measurement to the variables used in the research (Notoatmodjo, 2018).

Population is the total of all objects in a study that will be analyzed in a certain way and in a certain number before finally concluding (Sugiyono, 2018). The population required in this study is the community in the working area of the Uncle Health Center, with a total of 10 people.

The sample is a small part of the total study object and has certain characteristics and qualities so it is suitable for use in research (Sugiyono, 2018). In this study, researchers took a sample of 100 respondents.

Sampling technique is the process and method of sampling to estimate population status. Sample collection in this study applied a purposive sampling technique. Purposive sampling is a sample collection technique by creating parameters or conditions according to research needs (Ansori, 2020).

Research Result

5.1 Univariate Analysis

5.1.1 Distribution of Respondent Characteristics

5.1.1.1 Age Characteristics of Respondents

The following is the age distribution of respondentsin the working area of the Pamandegan Community Health Center:

Table 5.1Respondent's Age

Age	Amount	Percent (%)
18-25 years old	38	38.0
26-35 years old	44	44.0
36-60 years old	18	18.0
Total	100	100.0

Based on the table related to the age characteristics of respondents, it is known that the majority of respondents are aged 26 to 35 years, namely 44 respondents (44%). Age is a person's time used as a unit and can be seen from the degree of physiological and anatomical development according to the length of time they were born in the world(Fajar, 2022).

5.1.1.2 Respondents' Educational Characteristics

The following is the distribution of respondents' educationin the working area of the Pamandegan Community Health Center:

Table 5.2Respondent's Education

Education	Amount	Percent (%)
elementary school	12	12.0
JUNIOR HIGH SCHOOL	4	4.0
SENIOR HIGH SCHOOL	38	38.0
College	46	46.0
Total	100	100.0

Based on the table related to the educational characteristics of respondents in the Pamandegan Community Health Center working area, it is known that the majority of respondents had a tertiary education, namely 46 respondents (46%), 12 respondents had an elementary school education (12%), 12 respondents had a SSMP education. 4 respondents (4%) from SMA as many as 3 respondents (38%). Education is part of the process of changing the attitudes and behavior of each individual in an effort to mature themselves through educational teaching, training, certain processes and methods. Education is also closely related to the knowledge possessed by a person because of different learning(Fajar, 2022).

5.1.1.3 Respondent Job Characteristics

The following is the distribution of respondents' jobsin the working area of the Pamandegan Community Health Center:

Table 5.3Respondent's Occupation

Work	Amount	Percent (%)
Work	48	48.0
Doesn't work	52	52.0
Total	31	100.0

Based on the table related to the job characteristics of respondents, namely mothers in the working area of the Pamandegan Community Health Center, it is known that the majority of respondents do not work, namely 52 respondents (52%) while 48 respondents (48%) have jobs. Work is something that involves the company and employees and has the aim of obtaining wages or salaries(Dalimoenthe, 2021).

5.1.1.4 Distance to Health Facilities

The following is the distribution of distances to respondents' health facilitiesin the working area of the Pamandegan Community Health Center:

Table 5.4Distance to Health Facilities

Distance to Health Facilities		
Distance to Health Facilities	Amount	Percent (%)
< 3 km	67	67.0
>3km	33	33.0
Total	31	100.0

Based on the table related to the distance to health facilities, it is known that the majority of respondents in the Pamandegan Community Health Center working area have a residence location, the majority of which are close to health facilities, namely less than 3 km, 67 respondents (67%) while 33 respondents (33%) have a distance from health facilities of more than 3 km. from 3 km. The distance between residence to health facilities is one of the important things to support looh residence to health facilities is one of the important things to support optimal health, this is related to ease of access to reach health facilities(Fajar, 2022).

5.1.2 PCV Immunization Status

The following is the distribution of respondents' PCV immunization statusin the working area of the Pamandegan Community Health Center:

Table 5.5PCV Immunization Status

Immunization Status	Amount	(%)
Incomplete	34	34.0
Complete	66	66.0
Total	100	100.0

Based on the distribution table regarding PCV immunization status in the Pamandegan Community Health Center working area, it is known that the majority of respondents have complete immunization status, namely 66 respondents (66%) while 34 respondents (34%) have incomplete immunization status.

5.1.3 Knowledge of the PCV Immunization Program

The following is the distribution of knowledge regarding the respondents' PCV immunization programin the working area of the Pamandegan Community Health Center:

Table 5.6Knowledge of the PCV Immunization Program

Knowledge	Amount	Percent (%)
Good	85	85.0
Enough	15	15.0
Total	100	100.0

Based on the table related to the distribution of correspondents' knowledge about the PCV immunization program in the Pamandegan health center working area, it is known that the majority of respondents have good knowledge, namely 85 respondents (85%) and 15 respondents (15%) have a level of knowledge in the sufficient category.

5.1.4 Attitudes about the PCV Immunization Program

The following is the distribution of attitudes regarding the respondents' PCV immunization programin the working area of the Pamandegan Community Health Center:

Table 5.7Attitudes about the PCV Immunization Program

Attitude	Amount	Percent (%)
Positive	70	70.0
Negative	30	30.0
Total	100	100.0

Based on the table related to the distribution of respondents' attitudes regarding the PCV immunization program, it is known that the majority of respondents have a positive attitude, namely 70 respondents (70%), and there are 30 respondents (30%) in the negative category.

5.2 Bivariate Analysis

5.2.1 Relationship between Mother's Knowledge about the PCV Immunization Program and PCV Immunization Status

The following are the results of bivariate analysis using SPSS 25 software using the Chi square test and alternative person regarding the relationship between maternal knowledge about the PCV immunization program and PCV immunization status in the Pamandegan health center working area:

Table 5.8Relationship between Maternal Knowledge and PCV Immunization Status

		Knowledge				**P value**
		Good		Enough		
		n	%	N	%	
Immunization	Incomplete	19	19	15	15	0,000
	Complete	66	66	0	0.0	
Total		85	85	15	15	

Based on the results of bivariate analysis carried out using SPSS software, namely the chi square test with the alternative person test, it is known that the majority of respondents have good knowledge of complete immunization, namely 66 respondents (66%) with a p value of 0.00.

5.2.2 Relationship between maternal attitudes regarding the PCV immunization program and PCV immunization status

The following are the results of bivariate analysis using SPSS 25 software using the Chi square test and alternative person regarding the relationship between maternal attitudes about the PCV immunization program and PCV immunization status in the Pamandegan health center working area:

Table 5.9Relationship between Maternal Knowledge and PCV Immunization Status

		Attitude				**P value**
		Positive		Negative		
		n	%	n	%	
Immunization	Incomplete	9	9	25	25	0,000
	Complete	61	61	5	5	
Total		70	70	30	30	

Based on the table regarding the relationship between maternal attitudes regarding the PCV immunization program and PCV immunization status analyzed by researchers, it is known that the majority of respondents have a positive attitude with complete immunization status, 61 respondents (61%). Apart from that, it is also known that the significant value is 0.000.

Discussion

6.1 Relationship between Mother's Knowledge about the PCV Immunization Program and PCV Immunization Status

Based on the table related to the relationship between maternal knowledge about the PCV immunization program and PCV immunization status which was analyzed using SPSS 25 with the chi square test and alternative person, it is known that respondents who had incomplete immunization status with good knowledge were 19 respondents (19%) while respondents with Incomplete immunization and knowledge in the sufficient category were 15 respondents (15%). In addition, it is known that respondents with complete immunization status in the good knowledge category were 66 respondents (66%), which is the majority group from the analysis results. The results of the bivariate analysis show that the p value is 0.002, which means that H1 is accepted, namely that there is a significant relationship between maternal knowledge and PCV immunization status.

This is in line with researchSaputri et al. (2020)and researchBina & Listiono (2023)with a p value of 0.048<0.05, which means there is a significant relationship between maternal knowledge and PCV (Pneumococcal Conjugate Vaccine) immunization status. Additionally, researchDillyana (2019)also revealed that maternal knowledge is one of the factors that influences immunization status with a p value of 0.001<0.05.

Immunization status is a crucial thing that parents need to pay attention to for their children's health and to prevent various kinds of diseases caused by viruses and bacteria that can attack anytime and anywhere. Therefore, a mother, who is someone who tends to be closer to her child, must have a sufficient level of knowledge to pay attention to things that include the child's health, one of which is PCV immunization status.(Delianti et al., 2023). Knowledge regarding the PCV immunization program is the level of understanding of mothers in the Pamandegan Community Health Center area regarding the provision of immunizations to prevent pneumonia infections in children which are given at the age of 5 to 2 years. PCV immunization can be given to babies three times starting at the age of 2 months, 3 months and 12 months.(Afrida & Aryani, 2022).

Mothers' knowledge regarding the importance of PCV immunization is something they should have because it will have an impact on children's health, especially regarding the handling and prevention of pneumonia infections.(Bina & Listiono, 2023). Based on the results of analysis and observations carried out by researchers, the majority of mothers who have sufficient knowledge and incomplete PCV immunization tend to receive less education regarding the importance of immunization given to children or have a low level of education. This gives rise to a lack of concern by the mother regarding the child's immunization status so that she does not give more emphasis to providing complete immunization.

6.2 Relationship between maternal attitudes regarding the PCV immunization program and PC immunization status

Based on the results of the table regarding the relationship between maternal attitudes regarding the PCV immunization program and PCV immunization status in the Pamandegan Community Health Center area, it is known that the majority of respondents have a positive attitude with complete immunization status, namely 61 respondents (61%) while respondents with incomplete immunization status are 9 respondents. (9%). In addition, it is known that there are 25 respondents (25%) who have a negative attitude regarding incomplete immunization and 5 respondents (5%) who have a negative attitude regarding complete immunization status. The analysis was carried out using SPSS 25 software with the q square test and alternative person regarding the relationship between the mother's attitude towards PCV immunization status and obtained a p value of 0.002, which means that H2 was accepted, namely that there was a significant relationship between the mother's attitude towards PCV immunization status.

This is in line with researchAstrid et al. (2023)And(Rukmono et al., 2023)revealed that there was a significant relationship between PCV immunization status and maternal attitudes with a p value of 0.001<0.05. Apart from that, researchFauzia (2022)AndSimatupang (2020)which revealed that there was a relationship between the mother's attitude and the child's immunization status. Therefore, improving mothers' attitudes can be done by providing education and motivation regarding the importance of providing immunizations, especially complete PCV immunization, to children to support children's health and prevent disease.(Ariani et al., 2023).

Attitude is a reaction of each individual which is still closed regarding the stimulation of several factors so that they obtain opinions and emotions in them as manifestations that are interpreted but cannot be seen directly. The mother's attitude regarding PCV immunization status is one of the important things that has an impact on children, especially regarding health and preventing pneumonia(Mulyani et al., 2023). In this study it was found that the majority of mothers who had a positive attitude towards PCV immunization tended to have a higher contribution in carrying out immunization and completing PCV immunization, while mothers who had a negative attitude towards PCV immunization tended to be able to not complete PCV immunization.(Mangindara et al., 2022). Based on the results of the analysis carried out by researchers, some mothers who have a positive attitude and complete immunization status tend to want optimal health for their children and have knowledge of the importance of immunization.

Conclusion

Based on this explanation, the following conclusions can be obtained:

1. The majority are 26 to 35 years old, 14 respondents (45.2%), with a high school education, namely 15 respondents (48.4%), the majority of respondents do not work, namely 16 respondents (51.6%), the majority are close to health facilities. namely < 3 km as many as 20 respondents (64.5%).
2. The majority of respondents had complete immunization status, namely 21 respondents (67.7%).
3. The majority of respondents had good knowledge, namely 27 respondents (87.1%).
4. The majority of respondents had a positive attitude, namely 24 respondents (77.4%).
5. There is a relationship between maternal knowledge about the PCV immunization programwith PCV immunization statuswith a significant value of 0.002.
6. There is a relationship between maternal attitudes regarding the PCV immunization programwith PCV immunization statuswith a significant value of 0.002.

Suggestion

7.2.1 For Community Health Centers

This research can be used as a source of reference and sufficient understanding to improve the service sensitivity of the Pamandegan Community Health Center.

7.2.2 For the Community

This research can be used as a source of information and education regarding the importance of PCV immunization for children.

7.2.3 For Further Researchers

It is hoped that this research can be used by future researchers as reference material and further research regarding perceptions of factors related to attitudes about the PCV immunization program.

References

[1] Afrida, BR, & Aryani, NP (2022). Textbook of Midwifery Care for Neonates, Babies, Toddlers and Preschool Children. NEM Publishers. https://books.google.co.id/books?id=vfxgEAAAQBAJ

[2] Ansori, M. 2020. Quantitative Research Methods Edition 2. Airlangga University. Press.

[3] Ariani, AW, Salamarini, DD, Hakim, AR, Studi, P., Midwifery, S., Health, F., Mulia, US, Study, P., Pharmacy, S., Health, F., & Mulia, US (2023). The Influence of the Role of Health Workers and Mother's Knowledge on Mother's Motivation regarding PCV Immunization in the Community Health Center Work Area. S. 1(5), 196–200.

[4] Arifin, 2018. The Relationship between Mothers' Level of Knowledge About the Importance of Basic Immunization and Compliance with Immunization at Bps Hj. Umi Salamah in Kauman village, Peterongan, Jombang, 2018.

[5] Astrid, CP, Duarsa, Aena, M., Anulus, A., & Priono, RIP (2023). Maternal Compliance Level in Immunization Completeness Status at Age 0-36 Months at Cakranegara Community Health Center, Mataram City in 2023. Medical Journal, 8(2), 125–141. https://doi.org/10.36679/kedokteran.v8i2.47

[6] Az Zahra, M. (2022). COMPARISON OF THE EFFECTIVENESS OF COUNSELING USING POSTER MEDIA AND VIDEO MEDIA TO INCREASE DENTAL HEALTH KNOWLEDGE (Doctoral dissertation, Tanjungkarang Health Polytechnic).

[7] Bina, A., & Listiono, H. (2023). Factors that Influence the Provision of PCV (Pneumococcal Conjugate Vaccine) Immunization in Babies. Midwifery Journal: Budi Mulia Journal of Health Sciences, 13(1), 57–62. https://doi.org/10.35325/kebidanan.v13i1.344

[8] Chintia, R., & Suryani, D. (2021). The relationship between the mother's level of knowledge about basic immunization and compliance with basic immunization for babies. Scientia Journal, 10(2), 255-263.

[9] Dalimoenthe, I. (2021). Sociology of Gender. Surabaya: Bumi Aksara.

[10] Delianti, N., Fajri, N., Sriasih, NK, Septiana, N., Rahayuningsih, I., Juwita, R., Fazrina, A., Harini, R., & Nabilah, I. (2023). Nursing Textbook. PT. Sonpedia Publishing Indonesia. https://books.google.co.id/books?id=HtvbEAAAQBAJ

[11] Dillyana, TA (2019). Relationship between Mother's Knowledge, Attitudes and Perceptions with Basic Immunization Status in Wonokusumo. PROMKES Journal, 7(1), 67. https://doi.org/10.20473/jpk.v7.i1.2019.67-77

[12] Fajar, NA (2022). Sociology of Health. Jakarta: Gramedia.

[13] Faot, M. I. (2019). The Relationship between Knowledge About Dental Caries and Motivation to Perform Dental Caries Removal (In Patients at the Soe City Health Center Dental Clinic) (Doctoral dissertation, Department of Dental Nursing).

[14] Fauzia, NS (2022). The Relationship between Knowledge, Education and Mother's Attitudes towards the Accuracy of the Basic Immunization Schedule at PMB Midwife Eti in 2022. Open Access Jakarta Journal of Health Sciences, 1(12), 478–486. https://doi.org/10.53801/oajjhs.v1i12.178

[15] Ghozali, Imam. 2018. Application of Multivariate Analysis with the IBM SPSS Program. 25

[16] Gupta, Ronny Andrian (2019) THE RELATIONSHIP OF PARENTS' SMOKING HABITS WITH THE INCIDENT OF PNEUMONIA IN TODDLERS AT WANGAYA HOSPITAL IN 2019. Diploma thesis, Health Polytechnic, Ministry of Health, Denpasar, Nursing Department.

[17] HARTATI, Y., Linda, L., Darwis, D., Sumiati, S., & Ningsih, L. (2021). Promotion of Individual Health Education using Audio Visual Media via Mobile Phones on Knowledge and Attitudes of the Elderly about Diabetes Risk Factors IN SUKAMERINDU DISTRICT (Doctoral dissertation, Poltekkes Kemenkes Bengkulu).

[18] Hasanah, MS, Lubis, AD, & Syahleman, R. (2021). Relationship between mother's level of

knowledge about basic immunizations and compliance with basic immunizations for babies. Borneo Scholar's Journal, 5(1), 53-63.

[19] Hermawan, S., & Amirullah. (2021). Business Research Methods: Quantitative & Qualitative Approaches. Media Nusa Creative (MNC Publishing). https://books.google.co.id/books?id=tHNMEAAAQBAJ

[20] IDAI. 2020. Immunization schedule for children aged 0-18 years, recommendations from the Indonesian Pediatrician Association (IDAI), 2020 (p. 2020).

[21] Indriani, DP (2019). ANALYSIS OF THE LEVEL OF KNOWLEDGE AND ATTITUDES OF RESPONDENTS REGARDING OPTIONAL IMMUNIZATION AT PKU MUHAMMADIYAH YOGYAKARTA HOSPITAL.

[22] Iswanti, T., & Tansah, A. (2019). The Relationship Between Family Support and Basic Immunization Completeness in the Working Area of the Rangkasbitung Community Health Center, Cijoro Lebak Village, 2018. Journal of Medicine (Health Information Media), 6(2), 265-272.

[23] Izurieta, P., Bahety, P., Adegbola, R., Clarke, C., Izurieta, P., Bahety, P., ... Group, F. (2018). Expert Review of Vaccines Public health impact of pneumococcal conjugate vaccine infant immunization programs : assessment of invasive pneumococcal disease burden and serotype distribution. Expert Review of Vaccines, 17(6), 479–493. https://doi.org/10.1080/14760584.2018.1413354

[24] Jati, RK, Yulinda, D., Amelia, OR, & Djufri, S. (2021, October). Toddler Immunization Socialization and Services during the Simultaneous Movement for Toddler Boster Immunization (Pager Sibotak) Week. In NATIONAL SEMINAR PROCEEDINGS ON COMMUNITY SERVICE RESULTS (Vol. 1, No. 1, pp. 55-57).

[25] JEAFITA, JEAFITA (2021) OVERVIEW OF HOUSE CONDITIONS FOR TODDLERS WITH PNEUMONIA IN GEDUNG MENENG VILLAGE, TULANG BAWANG DISTRICT, 2021. Diploma thesis, Tanjungkarang Health Polytechnic.

[26] Karo–Karo, EN (2021). THE IMPORTANCE OF KNOWLEDGE ABOUT PHYSICAL FITNESS AND EXERCISE IN THE ELDERLY AT KORPRI HOUSING COMPLEX IN 2021 (Doctoral dissertation, QUALITY UNIVERSITY OF BERASTAGI)

[27] Indonesian Ministry of Health. (2019). Complete Immunization for Healthy Indonesia. Accessed from: http://p2p.kemkes.go.id/

[28] Indonesian Ministry of Health (2022). National PCV Immunization Launching. Retrieved from https://www.youtube.com/watch?v=0g54pm5gL_w&t=1948s

[29] Indonesian Ministry of Health. (2022, July 27). Ministry of Health Together with Health Professional Organizations Strengthen the National Immunization Program by Providing Double Immunization. Indonesian Ministry of Health. http://p2p.kemkes.go.id/kemenkes-bersama-organization-profesi-kesehatan-perkuat-program-immunization-national-dengan-pemberian-immunization-ganda/

[30] Ministry of Health of the Republic of Indonesia. (2019). 2019 Indonesian Health Profile Data and Information

[31] Indonesian Ministry of Health. (2022). TECHNICAL INSTRUCTIONS for Implementing Conjugated Pneumococcal Immunization (PCV).

[32] Mangindara, Windarti, S., Ngkolu, NW, & Ekawaty, D. (2022). Counseling on the Importance of Immunization in Borongkaramasa Hamlet, Toddotoa Village, Pallangga District, Gowa Regency. Pelamonia Community Service Journal, 2(2), 10–15. https://ojs.iikpelamonia.ac.id/index.php/pengabdian/article/download/237/273

[33] Masturoh, I., and N. Anggita. 2018. Health Research Methodology. Indonesian Ministry of Health. Jakarta

[34] Mawardi, M. (2019). Signs for Preparing a Likert Model Attitude Scale to Measure Student Attitudes. Scholaria: Journal of Education and Culture, 9(3), 292-304.
[35] Mardianti, M., & Farida, Y. 2020. Factors Associated with Basic Immunization Status for Babies in South Rengasdengklok Village, Karawang Regency. Indonesian Midwifery Journal: Journal of Indonesian Midwifery, 11(1), 17. https://doi.org/10.36419/jkebin.v11i1.322
[36] Mulyani, HD, Rahmaningtyas, I., & Sendra, E. (2023). Mother's Attitudes and Beliefs Regarding the Completeness of Providing Basic Immunizations to Children 12-24 Months. 19(2), 123–128. https://doi.org/10.31983/link.v19i2.10302
[37] Nasution, E.Y. (2022). Providing Complete Basic Immunization. PT Innovation Pratama Internasional.
[38] Nilawan, D., Lestari, I., & Wicaksono, A. (2022). DETERMINANTS OF ACHIEVEMENT OF PENTAVALENT IMMUNIZATION (DPT-HB-HIB) IN GEDONGAN HEALTH CENTER, MOJOKERTO CITY (Doctoral dissertation, Bina Sehat University Library).
[39] Notoatmodjo, S. 2018, Health Research Methodology, Jakarta: Rineka Cipta
[40] Nurmala, I., Rahman, F., Nugroho, A., Erlyani, N., Laily, N., & Yulia Anhar, V. (2018). Health Promotion (Zadina (ed.); Print 1). Yogyakarta: Science Graha. ISBN: 978-602-473-040-6
[41] Putri, I., Harahap, LKS, & Henniwati, H. (2022). The relationship between maternal knowledge and attitudes and providing basic immunization during the Covid-19 pandemic. Femina: Midwifery Scientific Journal, 2(2), 96-103.
[42] Rahayu (2021) THE RELATIONSHIP OF FATHER'S KNOWLEDGE AND SUPPORT WITH COMPLIANCE WITH BASIC IMMUNIZATION AT THE PRATAMA CLINIC KEDATON BANTUL YOGYAKARTA 2021. thesis, Poltekkes Kemenkes Yogyakarta.
[43] Romanto, E., & Hidayah, N. (2020). The influence of basic knowledge and entrepreneurial competence on the entrepreneurial motivation of Tarumanagara University students. Journal of Managerial and Entrepreneurship, 2(2), 479-489
[44] Sanifah, Laili jamilatus (2018) The Relationship between Knowledge Level and Family Attitudes Regarding Activities Daily Living (ADL) Care (In Candimulyo Hamlet, Candimuyo Village, Jombang District, Jombang Regency). Undergraduate thesis, STIKes Insan Medika Scholar Jombang.
[45] Saputri, E., Endarti, D., & Andayani, TM (2020). Level of Parents' Knowledge of Pneumonia and Pneumococcal Conjugate Vaccine (PCV) Immunization in Indonesia. JOURNAL of Management and Pharmacy Practice, 10(2), 156. https://doi.org/10.22146/jmpf.54423
[46] Sari, MP, & Cahyati, WH (2019). Trends in Toddler Pneumonia in Semarang City 2012-2018. Higeia Journal Public Health, 3(3), 408.
[47] Septiani, B., & Djuhan, MW (2021). Teachers' Efforts to Improve Students' Social Attitudes through Discussion Methods in Social Sciences Subjects. JIIPSI: Indonesian Journal of Social Sciences, 1(2), 61-78.
[48] Simatupang, M. (2020). Factors that Influence Mothers on Basic Immunization Status in Babies Aged 12-24 Months in Nauli Village, Sigumpar District, Toba Samosir Regency, 2019. Gentle Birth Journal, 3(2), 33–45. https://garuda.ristekbrin.go.id/documents/detail/1745965
[49] Siwi Pertiwi, I Gusti Ayu (2021) FACTORS RELATED TO COMPLETE BASIC IMMUNIZATION STATUS IN BABIES DURING THE COVID-19 PANDEMIC AT VIDYAN MEDIKA MAIN CLINIC. Diploma thesis, Department of Midwifery 2021.
[50] Sugiyono. 2018. Quantitative, Qualitative and R&D Research Methods, publisher. Alphabeta, Bandung
[51] Suhasri, AH, Ismail, F., & Afgani, W. (2023). THE IMPORTANCE OF AFFECTIVE VALUES IN IMPROVING STUDENTS' RELIGIOUS ATTITUDES. ADIBA: JOURNAL OF EDUCATION, 3(2), 273-278.

[52] Sukawati, Ni Kadek Dian (2020) OVERVIEW OF NURSING CARE FOR PNEUMONIA PATIENTS WITH INEFECTIVE AIRBORNE CLEARANCE IN THE OLEG ROOM OF MANGUSADA RSD BADUNG IN 2020. Diploma thesis, Denpasar Health Polytechnic, Nursing Department.
[53] Sulistyaningsih, Roisah, Purwanto H, Karbito, Nugraheni SA. Effectiveness of Pneumonia Control Strategies to Reduce Child Mortality in Indonesia. J Helath Stud. 2019;3(1).
[54] Toji, Maria Elsan (2023) PROFILE OF PNEUMONIA TREATMENT IN INpatient PATIENTS AT "X" HOSPITAL, MALANG CITY, PERIOD JANUARY - DECEMBER 2021. Other thesis, STIKES Panti Waluya Malang.
[55] WHO.Pneumonia.https://www.who.int/news-room/fact-sheets/detail/pneumonia. Published 2019. Accessed July 17, 2020.
[56] World Health Organization. (2019). Pneumonia