The natural infection rates of vaccine-preventable diseases among children: A literature review

By Sri Yuliani Frisilia

WORD COUNT 6308 TIME SUBMITTED 17-DEC-2023 06:11PM

PAPER ID 1055525541

Malahayati International Journal of Nursing and Health Science, Volume 06, No.6, December 2023: 419-431

MINH
MALAHAYATI INTERNATIONAL JOURNAL OF NURSING AND HEALTH SCIENCE
ISSN 2620-9152 (Print)
ISSN 2621-4083 (Online)
DOI: 10.33024

Nomor: 79/E/KPT/2023

ARTICLE INFORMATION
Received: November, 21, 2023
Revised: December, 14, 2023
Available online: December, 17, 2023
at : http://ejurnalmalahayati.ac.id/index.php/nursing/index

The natural infection rates of vaccine-preventable diseases among children: A literature review

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

Abstract

Background: Indonesia currently faces a triple burden of various disease problems, outbreaks of infectious diseases, and an increase in long-standing infectious diseases, new infectious diseases, and non-communicable diseases (NCDs). A report released in 2020 by the United Nations International Children's Emergency Fund (UNICEF) and the World Health Organization (WHO) indicated that during the Covid-19 pandemic, the postponement of routine vaccinations resulted in approximately 80 million children aged less than or equal to 12 months being susceptible to diphtheria, measles, and polio.
Purpose: To review previous research in analyzing the relationship between incomplete basic vaccination and the occurrence of vaccine-preventable disease (VPD) cases.
Method: This study employed a literature review design, conducting a systematic review by selecting relevant articles pertaining to the research objective. The literature study selection process was adapted from the Preferred Reporting Items for Systematic Reviews (PRISMA-ScR). Inclusion criteria for this research encompassed originality, usage of both English and Indonesian languages, keywords covering basic vaccination, adverse events following vaccination, Integrated Healthcare Centervisits, education, and the role of Integrated Healthcare Centercadres.
Results: Generally, community knowledge, attitudes, family support, and the role of cadres correlated with vaccination coverage achievement. However, some studies indicated no correlation between specific variables and the infants' basic vaccination status. To enhance vaccination coverage and client satisfaction, improving community knowledge, attitudes, family support, the role of healthcare workers and Integrated Healthcare Centercadres, as well as increasing vaccine availability and vaccination guidelines, are necessary.
Conclusion: To improve vaccination coverage and client satisfaction, enhancements in community knowledge, attitudes, family support, the role of healthcare workers and Integrated Healthcare Centercadres, alongside increased vaccine availability and vaccination guidelines, are essential.
Suggestion: It is advisable for the community to enhance knowledge, attitudes, and support for vaccination, especially among mothers and families. The active involvement of cadres in vaccination programs and public dialogue regarding the moral ethics of vaccination also need improvement.

Keywords: Adverse Events Following Vaccination; Basic Vaccination; Cadres; Education; Integrated Healthcare.

INTRODUCTION

Indonesia is currently facing a triple burden of disease, including various health problems and outbreaks of infectious diseases. Additionally, cases of both long-standing infectious diseases, new infectious diseases, and non-communicable diseases (NCDs) are continuously increasing. A

DOI: https://doi.org/10.33024/minh.v6i6.13054

report released in 2020 by the United Nations International Children's Emergency Fund (UNICEF) and the World Health Organization (WHO) indicated that, during the Covid-19 pandemic, the postponement of routine vaccinations resulted in approximately 80 million children aged less than or equal to 12 months being susceptible to diphtheria, measles, and polio. This study covered 107 countries, with 64% of them experiencing delays. Moreover, 60 countries delayed disease prevention campaigns such as measles and polio. Measles, polio, diphtheria, and other vaccine-preventable diseases (VPD) can lead to outbreaks (Dewanti, Notoatmodjo, & Agustina, 2022). According to the WHO, an estimated 20 million children have not received comprehensive vaccination, and there are even children who have not been vaccinated at all (World Health Organization, 2014).

In the Republic of Indonesia's Minister of Health Regulation number 12 of 2017, vaccination is considered an effective and affordable disease prevention method believed to prevent the spread of diseases to other regions. The primary objective of implementing vaccination programs, according to Republic of Indonesia Law number 36 of 2009, is to reduce morbidity and mortality due to diseases such as diphtheria, measles, polio, and other VPDs (Ministry of Health of the Republic of Indonesia, 2017). One category of VPDs, included in Indonesia's vaccination program, comprises tuberculosis, diphtheria, pertussis, tetanus, measles, rubella, poliomyelitis, hepatitis B, meningitis, pneumococcus, Japanese encephalitis, and human papillomavirus. Additionally, there are other VPDs not included in the vaccination program but categorized as optional diseases, such as typhoid, flu, rotavirus, and mumps (Pertiwi, 2021).

The Ministry of Health of the Republic of Indonesia conducted a rapid assessment from April 20 to 29, 2020, to evaluate the impact of the Covid-19 pandemic on vaccination services in Indonesia. Out of 9,993 vaccination coordinators at the primary healthcare level, 5,329 participated in the assessment. They were from 388 out of 514 districts/cities in 34 provinces. The study indicated that during the Covid-19 pandemic, 84% of primary healthcare centers delayed or stopped vaccination services. If this continues without intervention, community immunity will be affected. Decreased community immunity can increase the risk of diseases such as diphtheria, measles, polio, and other VPDs (Ministry of Health of the Republic of Indonesia, 2022).

The Universal Child vaccination (UCI) in Indonesia decreased from 2018 to 2020. In 2018, the UCI averaged 82.13%, but it decreased to 81.34% in 2019 and further dropped to 59.2% in 2020. This decline was also observed in South Sumatra, where UCI reached 94.5% in 2019 but dropped to 59.2% in 2020. However, it's worth noting that the UCI target has not yet been achieved in several primary healthcare centers. Therefore, efforts need to be made to improve this situation (Ministry of Health of the Republic of Indonesia, 2014). Thus, researchers are interested in conducting further examination on the topic of analyzing the relationship between incomplete basic vaccination factors and the occurrence of VPD cases using literature review techniques.

METHOD

This research employed a literature review design, conducting a systematic review by selecting relevant articles aligned with the research objectives. The literature study selection process was adapted from the Preferred Reporting Items for Systematic Reviews (PRISMA-ScR). Inclusion criteria for this study encompassed originality, usage of English and Indonesian languages, keywords covering basic vaccination, adverse events following vaccination, Integrated Healthcare Centervisits, education, and the role of Integrated Healthcare Centercadres.

Article searches were conducted through online databases including Scopus, Google Scholar, Semantic Scholar, and PubMed published within the last ten years, between 2011 and 2022. The results from the selected articles will be analyzed descriptively and systematically to achieve the research objectives. The researcher followed a process to determine articles that fit the inclusion and exclusion criteria, using the PRISMA method for searching and determining selected articles in this systematic review.

The research process involved several stages. First was the database search, collecting a total of 112 articles obtained from various reference sources: 11 articles from Scopus, 72 articles from Google Scholar, 19 articles from Semantic Scholar, and 20 articles from PubMed. Out of these, 72 articles couldnot be accessed, leaving 50 articles.

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

Subsequently, after filtering, 8 articles were found to be non-original studies, resulting in 42 articles. However, upon further review, 22 articles were found to have irrelevant topics. Finally, 20 articles with relevant and suitable content aligned with the research topic were obtained for comprehensive examination.

RESULT

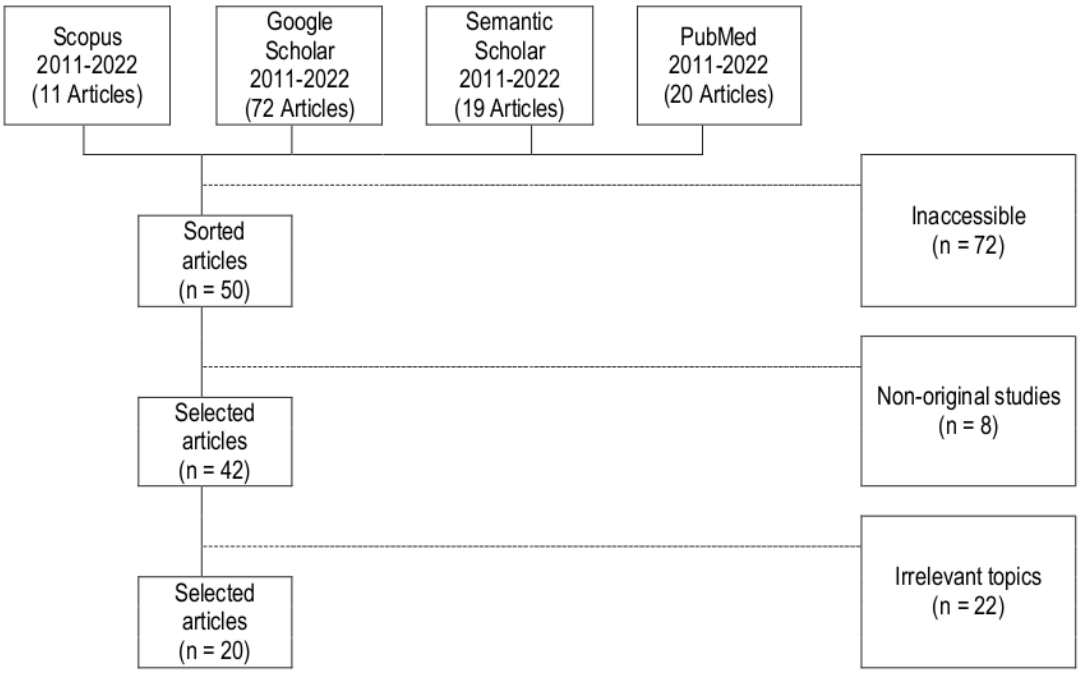

Figure 1. Flowchart of the Article Selection Process Based on the PRISMA-ScR

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

Table 1. Details of Key Journal Findings for Literature Review

References	Titles and Purpose	Method	Results
Truong, Thai, Nguyen, Nguyen, Le, Le, & Huynh, 2023.	Levels and Associated Factors of Clients' Satisfaction Toward Child vaccination at Grassroot Health Care Centers in Ho Chi Minh City, Vietnam. This study evaluates the level of client satisfaction with child vaccination and identifies related factors.	A cross-sectional study based on convenience sampling technique and self-reported questionnaire completion. Satisfaction was measured using the SWISQ questionnaire	The majority of participants (85.5%) were females with an average age of 33.3 (standard deviation = 9.0). About 60% of participants reported a moderate (40.2%) or high (17.1%) level of satisfaction. Participants with older children and longer waiting times had lower satisfaction levels. However, higher satisfaction levels were associated with health service provider reminders, follow-up area conditions, vaccine storage, and vaccination processes meeting participant needs.
Asmare, Madalicho, & Sorsa, 2022.	Disparities in full vaccination coverage among urban and rural children aged 12-23 months in southwest Ethiopia: A comparative cross-sectional study. The purpose of this research was to determine the level of full vaccination coverage among children aged 12 to 23 months in both urban and rural Southwest Ethiopia.	A comparative cross-sectional study of sampled. Chi-square testing was used to determine whether there was a significant difference in full vaccination coverage between urban and rural children, and binary logistic regression was used to identify predictors of full vaccination.	There were several findings regarding complete vaccination coverage in children. The vaccination response rate reached 98.4%, yet the overall coverage of complete vaccination in all children was only 66.1%. There was a significant difference between complete vaccination coverage in urban areas (74.3%) and rural areas (59.2%) with a chi-square value of 16.126 and p=0.000. Several predictor variables affected overall complete vaccination coverage. These variables included place of residence, wealth index, follow-up Antenatal Care (ANC), and fear of Covid-19 infection in healthcare facilities. Additionally, knowledge and place of delivery were predictor variables in urban areas, while distance and involvement of male partners were predictor variables in rural areas.
Dewanti et al., 2022.	Completeness Basic Infants vaccination To Achieve Universal Child vaccination At The Public Health Center Semparuk	This research was quantitative with a cross sectional approach. Sampling technique by means of total	The research findings indicated an infant vaccination completeness rate of 69%. Education, occupation, attitude, integrated health post, healthcare workers, and husbands all

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

	Sambas West Kalimantan In 2021. The purpose of this study was to determine the factors that most influence the completeness of basic vaccination for infants at the Semparuk Sambas public health center.	sampling.	correlated with vaccination completeness, as per logistic regression analysis. With an Odds Ratio (OR) of 3.444, attitude emerged as the most significant variable. This meant that the higher the likelihood of a mother adhering to her infant's vaccination schedule, the more positive her attitude towards vaccination. A positive maternal attitude also impacted how they handle the information they possess.
Subsittipong, Kim, & Han, 2022.	Delay in Vaccine Access in ASEAN Countries. The purpose of this study is to assess the availability and approval lag of vaccines in Asia-Pacific countries and compare them among Asia-Pacific countries, the United States (US), and Europe (EU).	The Mann-Whitney U test was used to test the statistical difference in the relative approval gap between the first SRA group and the first non-SRA group	Between 2010 and 2019, the WHO prequalified a total of 92 vaccines, but only 61 vaccines were included in the analysis. More than 50% of the vaccines were initially licensed by the non-SRA (Strategic Advisory Group of Experts on vaccination). This study identified differences in vaccine approval times between ASEAN countries and the US and EU. The median vaccine approval times in ASEAN countries were 30 months in Australia, 15 months in South Korea, 52 months in Thailand, and 23 months in Singapore, whereas in the US and EU, it was 0 months. There were significant differences in vaccine approval times between the first SRA and first non-SRA vaccines in South Korea and Thailand ($p < 0.05$).
Moorthy, Gill, Selvadurai, & Gurunathan, 2022.	Vaccine Justice and Bioethical Reflections of COVID-19 vaccination in Malaysia. This paper examines the ethical issues that arise in Malaysia's COVID-19 vaccination discourse, focusing on vaccine justice and the bioethical principle of 'respect for autonomy.	Using the method of interpretative social science approach to examine the issue of vaccine equity in Malaysia from a bioethical perspective	This report suggested the need for public discourse on moral ethics involving medical policies and practices, as well as broader issues such as the environment and well-being. Findings in the report indicated that principles of justice and autonomy play a crucial role in discussions surrounding vaccination, while values of beneficence and non-maleficence were secondary aspects integrated within the core elements.

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

Antono, Mediawati, & Nurhatisah, 2019.	The relationship between the mother's educational level and the basic vaccination status of infants in the Bangkok Village area under the Gurah Community Health Center, Kediri Regency.	The research method employed a cross-sectional design. Sampling was done through stratified random sampling. Data analysis included univariate and bivariate analysis, along with the utilization of the Spearman rank test	In the Bangkok village, within the Gurah Community Health Center area in Kediri Regency, a significant correlation was found between the mother's education level and the basic vaccination status of infants. With a p-value of 0.017 and a correlation coefficient of 0.299, the relationship between these two variables shows a positive correlation.
Kharin, Amellia, Auza, Utami, Rahman, & Hermawati, 2021.	Knowledge, Education, and Mother's Attitude towards Complete Basic vaccination in Bogor Regency. The research objective is to enhance the knowledge of mothers in Cipambuan Village regarding the importance of providing complete basic vaccination to infants.	Conducting situational analysis, problem prioritization, instrument development, and surveys to determine the reasons why mothers do not provide complete basic vaccination.	Mothers did not provide complete basic vaccination to their children due to various reasons. These included lack of knowledge, education levels, and attitudes that undervalue the importance of complete basic vaccination. To evaluate the intervention's outcomes, 68 respondents underwent a post-test assessment. The results indicated improved knowledge among mothers and their increased support for providing complete basic vaccination.
Pertiwi, 2021.	The factors associated with the complete basic vaccination status of infants during the COVID-19 pandemic at the Vidyan Medika Primary Clinic. This study aims to elucidate the description of complete basic vaccination and the factors correlated with its status in infants.	An analytical study using a cross-sectional approach	The results of the univariate study showed that the average age of mothers was 28.63 years. Bivariate test results indicated that maternal age (p=0.001), employment status (p=0.000), maternal education (p=0.000), ownership of the Child Health Card or other child health books (p=0.007), and maternal knowledge about complete basic vaccination were all variables associated with the complete basic vaccination status of mothers (60.6%).
Astuti, 2021.	Determinants of complete infant basic vaccination at the Tomuan Health Center in Pematang Siantar City. The objective of this study is to identify factors associated with the completeness of basic vaccination	The study utilized a quantitative method with a cross-sectional approach. Data collection involved questionnaires and is analyzed using univariate analysis to describe the	According to this study, there was a significant correlation between complete basic vaccination and maternal knowledge (p=0.011), family support (p=0.0001), and confidence (p=0.001). However, variables such as maternal education (p=0.225), occupation (p=0.467), distance to healthcare services (p=0.594),

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

	in infants at the Tomuan Health Center in Pematang Siantar City.	distribution and proportions, and bivariate analysis using Chi-Square	and number of children (p=0.054) did not show significant correlation. The study suggested that healthcare professionals should inform mothers about the importance of vaccination and enhance their motivation to do so. They should also monitor vaccination completeness. Additionally, mothers were advised to allocate time to communicate with their children.
Mardianti, & Farida, 2020).	Factors Associated with Basic vaccination in Infants in South Rengasdengklok Village, Karawang Regency.	Analytical research method with a cross-sectional approach using random sampling technique and data analysis with chi-square test	Most respondents did not have an academic degree (82.5%) and were not employed (91.3%). 61.3% of infants had complete vaccination status, and about 50% of mothers were aware of vaccination. While 75% of family traditions did not support vaccination, 53.8% of mothers support it. Additionally, 52.5% of mothers had a positive attitude toward vaccination. Furthermore, it was found that 88.8% of mothers were unaware of vaccination, 58.8% were not interested in it, 90% of healthcare workers actively conducted vaccination, 92% of healthcare facilities were available for vaccination, and 87.5% of mothers stated that healthcare services were very accessible. However, there was no relationship between determinant variables and the status of basic infant vaccination.
Andani, 2020.	Evaluation of Complete Basic vaccination Program for Infants at Sekancing Health Center in 2018.	This research method employed a qualitative approach with a descriptive analytical retrospective design. Researchers utilized in-depth interviews, documentation, as well as observation	The human resources of health at the community health center have the registration certificate and vaccination training certificates. In addition, health operational financial assistance and village financial assistance allocate resources for this.
Salimah, 2019.	Factors associated with the achievement of Universal Child vaccination (UCI) in the	The study utilized an analytical survey method with a cross-sectional	The research findings indicated that respondents' knowledge fell into categories of low (38.1%), moderate (55.6%), and high

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

	working area of Binjai Estate Community Health Center in 2019.	approach. Employing a proportional random sampling method, data analysis was conducted using the chi-square test at a confidence level of 90%.	(6.3%), with a p-value of 0.023 < 0.1. Respondents' perspectives were divided into negative (57.1%) and positive (42.9%) categories, with a p-value of 0.013 < 0.1. Family support was categorized as unsupported (54.0%) and supported (46.0%), with a p-value of 0.028 < 0.1. The cadre's role was divided into inactive (54.0%) and active.
Sibeudu, Uzochukwu, & Onwujekwe, 2019.	Rural–urban comparison of routine vaccination utilization and its determinants in communities in Anambra States, Nigeria. The study determined the levels of geographic differences in the utilization of routine vaccination between households in an urban and a rural community.	The data was analyzed using descriptive analysis and multiple logistic regression with a questionnaire	The rate of routine vaccination utilization was higher among households in urban communities (95.5%) compared to rural areas (75.3%), and this difference was statistically significant ($p < 0.05$). Furthermore, a higher percentage of rural residents (83.3%) received vaccination services from public health facilities compared to urban residents (42%; $p < 0.05$). According to regression analysis, the place of residence significantly influenced the utilization of routine vaccination services ($p < 0.05$).
Sari, & Nadjib, 2019.	Determinants of complete basic vaccination coverage among beneficiaries of the family hope program. This study aims to identify the determinants influencing the coverage of complete basic vaccination among infants receiving the Family Hope Program (PKH).	The study design employed was cross-sectional. The research was conducted across 34 provinces. The total population consisted of 9,205 respondents, utilizing secondary data from the National Socioeconomic Survey (Susenas) in the year 2017	97.34% received complete basic vaccination, while 2.66% did not. The results indicate a positive correlation between age and marital status. Both factors significantly impact the basic vaccination rate. Furthermore, education and occupation variables correlate significantly but negatively with basic vaccination coverage.
Acharya, Kismul, Mapatano, & Hatloy, 2018.	Individual- and community-level determinants of child vaccination in the Democratic Republic of Congo: A multilevel analysis. This study is aimed to	This study used data from the Demographic and Health Survey 2013–14 from the Democratic Republic of Congo. Data regarding a	This study found that 45.3% [95% CI: 42.02, 48.52] of children aged 12 to 23 months in Congo received complete vaccination. The vaccination rate ranged from 5.8% in the Mongala province to 70.6% in the Nord-Kivu province. According to multilevel

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

	assess the individual and community-level determinants of full vaccination coverage among children in the Democratic Republic of Congo.	total 3.366 children between 12 and 23 months of age were used in this study.	analysis, four ANC visits, institutional delivery, and utilization of Postnatal Care (PNC) services show statistically significant correlation with full vaccination coverage. Children whose mothers were relatively poorer, less educated, and from the poorest wealth quintile had a greater chance of receiving complete vaccination.
Shawon, Adhikary, Ali, Shamsuzzaman, Ahmed, Alam, & Uddin, 2018.	General service and child vaccination-specific readiness assessment of healthcare facilities in two selected divisions in Bangladesh. In this study, we assessed general service and child vaccination-specific healthcare facility readiness in two selected administrative divisions in Bangladesh, by facility levels.	A survey utilized the Service Availability and Readiness Assessment (SARA) manual developed by the World Health Organization (WHO). The analysis was grouped based on divisions and levels of health facilities	The general service readiness index for pharmacies, community clinics, primary care facilities, and higher-level care facilities in the Rajshahi division was 40.6%, 60.5%, 59.8%, and 69.5%, respectively. In the Sylhet division, the general service readiness index for pharmacies, community clinics, primary care facilities, and higher-level care facilities was 44.3%, 57.8%, 57.5%, and 73.4%, respectively. Across all facility levels, the highest scores were found for basic equipment (ranging from 51.7% to 93.7%), while the lowest scores were observed for diagnostic capacity (ranging from 0.0% to 53.7%)..
Safitri, Amir, & Woferst, 2017.	Factors associated with low coverage in providing complete basic vaccination to children. This study aims to determine the factors associated with low coverage in providing complete basic vaccination to children in the coverage area of the Umban Sari Health Center.	The research method used is correlational (relationship/ association) using a retrospective approach. The sampling method employed the cluster technique	The research findings indicate that there is no significant correlation between age and the low coverage of complete basic vaccination in children (p-value 0.527 > 0.05). However, there is a significant correlation between knowledge (p-value 0.001) and issues related to the use of counterfeit vaccines (p-value 0.029) with the low coverage of complete basic vaccination in children.
Prihanti, Rahayu, & Abdullah, 2016.	The factors influencing the status of complete basic vaccination in the working area of Public Health Center X in Kediri City. The aim of this research is to identify	Case-control design. Sampling conducted using simple random sampling technique	The research results indicate that four significant variables influence the completeness of basic vaccination in children: age (p=0.029; CI=0.012–0.955; OR=0.106), occupation (p=0.026; CI=1.300-9.539; OR=3.521), knowledge (p=0.019; CI= 0.054 –

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

	the factors that affect the completeness of basic vaccination in the working area of Public Health Center X in Kediri.		0.928; OR = 0.224), and the presence of toddlers (p = 0.00; CI = -; OR = -). The factors outlined in this study can explain about 35.4% of the completeness of basic vaccination, based on the adjusted R-square. Occupation (β = 1.590) is the factor with the most significant influence. Other factors such as education (p = 0.309), income (p = 0.378), attitude (p = 0.057), and the role of health workers (p = constant) do not have a significant correlation with the completeness of basic vaccination.
Azizah, Mifbakhudin, & Mulyanti, 2015.	Factors Associated with Completeness of Basic vaccination in Infants Aged 9-11 Months in Sumberejo Village, Mranggen District, Demak. This research aims to identify the factors associated with the completeness of basic vaccination in infants aged 9-11 months in Sumberejo Village, Mranggen District, Demak.	This type of research is descriptive analytics with a cross-sectional approach. The sampling technique used is the total population. The analysis was conducted using chi-square.	The results indicate that in Sumberejo Village, Mranggen District, Demak, there's a significant relationship between knowledge (p=0.000) and attitude (p=0.000) with vaccination completeness in children. Conversely, there is no correlation between maternal education (p=0.714) and income (p=1.000) with vaccination completeness in children.
Istriyati, 2011.	Factors Associated with Completeness of Basic vaccination in Infants in Kumpulrejo Village, Argomulyo Sub-district, Salatiga City.	Analytical survey with a case-control approach. Sample selection was done using area proportional probability random sampling technique. The instrument utilized was a questionnaire.	The study results show that several variables correlate with the completeness of basic vaccination in children. Mother's education level (p value = 0.008, OR = 4.297), mother's knowledge level (p value = 0.004, OR = 4.750), mother's employment status (p value = 0.001, OR = 7.667), and family members' support for vaccination (p value = 0.003, OR = 5.714) are some variables that correlate with the completeness of basic vaccination in children.

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

DISCUSSION

Education plays a crucial role in shaping parental behavior and impacts family health. Individuals with higher levels of education tend to possess better health knowledge, primarily acquired through formal education. However, for those with lower educational levels, seeking information sources beyond formal education, such as electronic media and reading materials, becomes crucial (Notoatmodjo, 2018; Prihanti et al., 2016).

Adverse medical occurrences following vaccination are termed Adverse Events Following vaccination (AEFI). AEFI doesnot always have a causal relationship with vaccine use. These reactions can be local or systemic, mild or severe, acute, or chronic. They might result from the vaccine itself, errors in handling and storing vaccines, mistakes in the vaccination process, or an unusual response from the vaccine recipient (Ministry of Health of the Republic of Indonesia, 2014; World Health Organization, 2014).

Integrated Healthcare Center, also known as integrated health service posts, holds a significant role in bringing healthcare services closer to the community. They also encourage mothers to pay attention to family food consumption patterns and their children's health. This aligns with the Minister of Health Regulation of the Republic of Indonesia Number 25, 2014, which stipulates that Integrated Healthcare Center should engage in activities as part of the community health program at the basic level at least once a month (Ministry of Health of the Republic of Indonesia, 2014).

An individual selected by the community and trained to handle health issues at both individual and community levels, working closely with healthcare facilities, is known as a community health worker. Community health workers in Integrated Healthcare Center, exemplify community-based health efforts carried out by the community to reduce maternal and infant mortality rates. Community health workers must be either male or female, permanently reside in the village, possess physical abilities, engage in social activities, and have literacy skills (Ministry of Health of the Republic of Indonesia, 2014).

Distance in the context of healthcare access encompasses more than just the physical gap between patients and healthcare providers. It also includes factors such as travel costs, travel time, and transportation availability. Considering ease and practicality in a person's journey to healthcare facilities is crucial. The definition of distance also covers difficulties or barriers in accessing healthcare services, including physical distance and other obstacles like transportation costs or a lack of information about available services (Syed, Gerber, & Sharp, 2013).

CONCLUSION

Factors such as knowledge, community attitudes, family support, the role of healthcare providers and Integrated Healthcare Center cadres, as well as demographic factors like education, occupation, and marital status, influence client satisfaction and child vaccination coverage. Additional factors like age, child gender, waiting times, healthcare facility conditions, and the vaccination process also have an impact. Appropriate actions are needed to reduce these disparities. Faster vaccine access in some countries highlights the need for more efficient and effective vaccine approval processes. Public discussions on the moral ethics of vaccination are also important and relevant to broader issues like welfare and the environment. vaccination programs at health centers lack vaccine availability and guidelines for vaccinations in Integrated Healthcare Center. Overall, community knowledge, attitudes, family support, and cadre roles correlate with vaccination coverage achievements, but some studies indicate no correlation between certain variables and infant basic vaccination status. Improving vaccination coverage and client satisfaction requires enhancing community knowledge, attitudes, family support, the role of healthcare providers and Integrated Healthcare Center cadres, as well as improving vaccine availability and vaccination guidelines. Efforts are needed to reduce disparities in vaccination coverage and improve the efficiency and effectiveness of vaccine approval processes.

SUGGESTION

To the community, it's important to enhance knowledge, attitudes, and support regarding vaccination, particularly among mothers and families. The active role of cadres in vaccination programs and public discourse on the moral ethics of vaccination also need improvement. Additionally, improving vaccine availability, vaccination guidelines,

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

and access to healthcare services such as Antenatal Care (ANC), Postnatal Care (PNC), and vaccination facilities are crucial. Efforts to reduce disparities in utilization and coverage of vaccination between urban and rural areas must also be undertaken. Enhancing mothers' motivation about the importance of vaccination, monitoring vaccination completeness, and considering factors like maternal employment status and wealth conditions are vital steps in improving vaccination coverage.

REFERENCES

Acharya, P., Kismul, H., Mapatano, M. A., & Hatloy, A. (2018). Individual-and community-level determinants of child immunization in the Democratic Republic of Congo: a multilevel analysis. *PloS one*, *13*(8), e0202742.

Andani, O. S. (2020). Evaluasi Program Imunisasi Dasar Lengkap Pada Bayi Di Puskesmas Sekancing Tahun 2018. *Jurnal Kesehatan dan Sains Terapan*, *6*(1), 27-51.

Antono, D. S., Mediawati, M., & Nurhatisah, M. (2019). Hubungan Tingkat Pendidikan Ibu dengan Status Imunisasi Dasar pada Bayi di Desa Bangkok Wilayah Kerja Puskesmas Gurah Kabupaten Kediri. *AngewandteChemie International Edition*, *6*(11), 951-952.

Asmare, G., Madalicho, M., & Sorsa, A. (2022). Disparities in full immunization coverage among urban and rural children aged 12-23 months in southwest Ethiopia: A comparative cross-sectional study. *Human Vaccines &Immunotherapeutics*, *18*(6), 2101316.

Astuti, R. W. (2021). *Determinan Kelengkapan Imunisasi Dasar Bayi Di Puskesmas Tomuan Kota Pematang Siantar* (Doctoral dissertation, Universitas Islam Negeri Sumatera Utara).

Azizah, N., Mifbakhudin, M., & Mulyanti, L. (2015). Faktor-Faktor Yang Berhubungan dengan Kelengkapan Imunisasi Dasar Pada Bayi Usia 9-11 Bulan Di Desa Sumberejo Kecamatan Mranggen Demak. *Jurnal Kebidanan*, *4*(1), 17-24.

Dewanti, D., Notoatmodjo, S., & Agustina, S. (2022). Completeness Basic Infants immunization To Achieve Universal Child immunization At The Public Health Center Semparuk Sambas West Kalimantan In 2021. *Journal of Ageing And Family*, *2*(1).

Istriyati, E. (2011). Faktor-faktor yang berhubungan dengan kelengkapan imunisasi dasar pada bayi di Desa Kumpulrejo Kecamatan Argomulyo Kota Salatiga. *Semarang: Fakultas Kesehatan Masyarakat, Universitas Negeri Semarang*.

Ministry of Health of the Republic of Indonesia. (2014). *Peraturan Menteri Kesehatan Republik Indonesia Nomor 25 Tahun 2014*. Retrieved from: https://peraturan.bpk.go.id/Details/117562/permenkes-no-25-tahun-2014

Ministry of Health of the Republic of Indonesia. (2017). Peraturan Menteri Kesehatan Republik Indonesia Nomor 12 tahun 2017. Retrieved from: https://peraturan.bpk.go.id/Details/111977/permenkes-no-12-tahun-2017

Ministry of Health of the Republic of Indonesia. (2022). Petunjuk Teknis Penyelenggaraan Bulan Imunisasi Anak Nasional. Retrieved from: https://ayosehat.kemkes.go.id/petunjuk-teknis-bulan-imunisasi-anak-nasional-bian

Kharin, A. N., Amellia, A., TP, C. F., Auza, D. F., Utami, E. S., Rahman, F. A. & Hermawati, E. (2021). Pengetahuan, Pendidikan, dan Sikap Ibu terhadap Imunisasi Dasar Lengkap di Kabupaten Bogor. *Jurnal Pengabdian Kesehatan Masyarakat (Pengmaskesmas)*, *1*(1).

Mardianti, M., & Farida, Y. (2020). Faktor–Faktor Yang Berhubungan Dengan Status Imunisasi Dasar Pada Bayi Di Desa Rengasdengklok Selatan Kabupaten Karawang. *Jurnal Kebidanan Indonesia*, *11*(1), 17-29.

Moorthy, R., Gill, S. S., Selvadurai, S., & Gurunathan, A. (2022). Vaccine justice and bioethical reflections of COVID-19 vaccination in Malaysia. *Sustainability*, *14*(19), 12710.

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

Notoatmodjo, S. (2018). *Promosi Kesehatan dan Perilaku Kesehatan,* Jakarta, Rineka Cipta.

Pertiwi, I. G. A. S. (2021). *Faktor-faktor yang berhubungan dengan status imunisasi dasar lengkap pada bayi selama masa pandemi Covid-19 di klinik utama VidyanMedika* (Doctoral dissertation, Jurusan Kebidanan 2021).

Prihanti, G. S., Rahayu, M. P., & Abdullah, M. N. (2016). Faktor–Faktor Yang Mempengaruhi Status Kelengkapan Imunisasi Dasar diwilayah Kerja Puskesmas X Kota Kediri. *Saintika Medika*, *12*(2), 120-128.

Safitri, D. M., Amir, Y., &Woferst, R. (2017). Faktor-faktor yang berhubungan dengan rendahnya cakupan dalam pemberian imunisasi dasar lengkap pada anak. *Jurnal Ners Indonesia*, *8*(1), 23-32.

Salimah, S. (2019). *Faktor Yang Berhubungan Dengan Pencapaian Kelurahan Uci (Universal Child Imunization) di Wilayah Kerja Puskesmas Binjai Estate Tahun 2019* (Doctoral dissertation, Institut Kesehatan Helvetia Medan).

Sari, W., & Nadjib, M. (2019). Determinan Cakupan Imunisasi Dasar Lengkap pada Penerima Program Keluarga Harapan. *Jurnal Ekonomi Kesehatan Indonesia*, *4*(1).

Shawon, M. S. R., Adhikary, G., Ali, M. W., Shamsuzzaman, M., Ahmed, S., Alam, N., & Uddin, M. J. (2018). General service and child immunization-specific readiness assessment of healthcare facilities in two selected divisions in Bangladesh. *BMC health services research*, *18*(1), 1-10.

Sibeudu, F. T., Uzochukwu, B. S., & Onwujekwe, O. E. (2019). Rural–urban comparison of routine immunization utilization and its determinants in communities in Anambra states, Nigeria. *SAGE open medicine*, *7*, 2050312118823893.

Subsittipong, N., Choi, J., Kim, T. H., & Han, E. (2022). Delay in Vaccine Access in ASEAN Countries. *International journal of environmental research and public health*, *19*(7), 3786.

Syed, S. T., Gerber, B. S., & Sharp, L. K. (2013). Traveling towards disease: transportation barriers to health care access. *Journal of community health*, *38*, 976-993.

Truong, L. T. T., Thai, T. T., Nguyen, T. V., Nguyen, T. Q., Le, T. A. T., Le, N. H., & Huynh, Q. N. H. (2023). Levels and Associated Factors of Clients' Satisfaction Toward Child vaccination at Grassroot Health Care Centers in Ho Chi Minh City, Vietnam. *Risk Management and Healthcare Policy*, 793-803.

World Health Organization. (2014). The Global Vaccine Safety Initiative: Global manual on surveillance of adverse events following immunization. Retrieved from: https://www.who.int/publications-detail-redirect/9789241507769

Sri Yuliani Frisilia Dewi*, Misnaniarti, Rizma Adlia Syakurah, Najmah, Nur Alam Fajar

Magister Ilmu Kesehatan Masyarakat Fakultas Kesehatan Masyarakat, Universitas Sriwijaya
Corresponding author: *E-mail: eyik.daffa@gmail.com

DOI: https://doi.org/10.33024/minh.v6i6.13054

The natural infection rates of vaccine-preventable diseases among children: A literature review

ORIGINALITY REPORT

13%
SIMILARITY INDEX

PRIMARY SOURCES

1	ejurnalmalahayati.ac.id Internet	321 words — 6%
2	www.ncbi.nlm.nih.gov Internet	213 words — 4%
3	"1st Annual Conference of Midwifery", Walter de Gruyter GmbH, 2020 Crossref	92 words — 2%
4	journal.untar.ac.id Internet	52 words — 1%
5	repository.helvetia.ac.id Internet	52 words — 1%

EXCLUDE QUOTES	OFF	EXCLUDE SOURCES	< 50 WORDS
EXCLUDE BIBLIOGRAPHY	ON	EXCLUDE MATCHES	OFF