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Factors Related to Completeness of Basic Immunization During the Covid-19 Pandemic at PMB I.S Kebon Jeruk West Jakarta 2021

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Abstract

Diseases caused by infections are still a health problem in developing countries, including Indonesia. According to the World Health Organization (WHO) in 2018, an estimated 19.9 million babies worldwide were not reached by routine immunization services. Around 60% of these children living in 10 countries including Indonesia are not immunized. One of the international commitments to improve the health status of children is the UCI (Universal Child Immunization) program, which is a state of achieving complete basic immunization for infants. Immunization. This research is a quantitative study with a cross-sectional design, using primary data with a sample of 108 mothers and infants and data analysis using chi-square. There was a significant relationship between nutritional status (p value = 0.040), baby's medical history (p value = 0.040), mother's knowledge (p value = 0.001), distance from home (p value = 0.044), health insurance (p value = 0.040) In conclusion, there is a significant relationship with all the variables studied, suggestions for mothers who have babies should immunize their children on time, considering that immunization is very important to equip their children with health in the future.

Keywords: Immunization, Covid-19, Infants

Introduction

Diseases caused by infections are still a health problem in developing countries, including Indonesia. Infectious diseases are the main cause of child mortality. Infectious diseases that are quite high require prevention efforts, one of which is immunization. Diseases that can be prevented by immunization, or commonly referred to as PD3I (Immunization Preventable Diseases), these diseases are Tuberculosis, Hepatitis B, Diphtheria, Pertussis, Tetanus, Measles, and Polio. Immunization is important because it

can protect against various dangerous diseases. Diseases that can be prevented by immunization (PD3I) are still attracting attention.

In immunization there is the concept of Herd Immunity or group immunity. This group immunity can only be formed if the immunization coverage is high and evenly distributed throughout the region. The immunity of most of these targets will indirectly help provide protection for other age groups, so that if there are one or a number of cases of disease, disease that can be prevented by immunization (PD3I) in the community,

the disease will not spread quickly and extraordinary events will occur. outbreaks) can be prevented. This concept is proof that the immunization program is very effective as well as efficient because only by targeting vulnerable groups can the entire community be protected.

Immunization is mandatory for infants aged 0-9 months. Immunization is an effort to actively generate or increase a person's immunity against a disease, or an attempt to provide immunity to infants and children by introducing vaccines into the body to stimulate the manufacture of antibodies aimed at preventing certain diseases. In Indonesia, immunizations that have been required by the government as well as those that have been required,

The immunization program is one of the efforts to protect the population against certain diseases. The immunization program is given to populations that are considered vulnerable to contracting infectious diseases, namely infants, school-age children, women of childbearing age, and pregnant women. Each baby is required to receive five complete basic immunizations consisting of one dose of HB0, one dose of BCG, three doses of DPT-HB-Hib, 3 doses of injectable polio and 1 dose of polio injection, and one dose of measles rubella. The 2018 Basic Health Research data shows that 32.9% of infants in Indonesia did not receive complete basic immunization and 9.2% of infants did not immunize, an increase from 2018 which was 32.1%. The immunization coverage target in DIY is 95% and has been met for the DIY region. Meanwhile, in DKI Jakarta, it is 97.7%. The results of the report show that immunization coverage in 2019 has met all targets because it is already above 95%.

An estimated 19.9 million babies worldwide were not achieved with routine immunization services. Around 60% of these children living in 10 countries including Indonesia are not immunized. Monitoring data at the sub-national level is critical to helping countries prioritize and adjust vaccination strategies and operational plans to address immunization gaps and reach everyone with life-saving vaccines. The Ministry of Health of the Republic of Indonesia has compiled a program as an effort to suppress diseases that can be prevented by immunization (PD3I) in children, including the Immunization Development Program (PPI) in children since 1956.

Infant and under-five mortality rates due to diseases that can be prevented by immunization are still quite high. In 2010, 1.4 million children under five worldwide died from diseases that could be prevented by immunization. PD3I cases in Indonesia in 2014 according to data from the Ministry of Health of the Republic of Indonesia on the Indonesian Health Profile in 2014 showed the number of neonatal tetanus was 64.3%, an increase from the previous year which was 53.8% with 54 cases of death. Measles was found in 12,943 cases, an increase from 11,521 cases in 2013 and 396 cases of diphtheria with 16 cases of death (Ministry of Health, 2020).

The number of babies in the Kebon Jeruk area was 362,873, in 2018 the achievement was 98.7%, in 2019 it increased to 98.9% but experienced a drastic decrease in 2020 to 80%. This is because the Covid-19 pandemic has made immunization achievements in the West Jakarta area, especially Kebon Jeruk, decreased drastically. PMB Indra Suryaning handles infant immunization services, immunization coverage in 2019 for infants, was at 1107, in 2020 it

experienced a drastic decline with a coverage of 816. Health facilities, especially carrying babies, is not due to health workers, but because of the Covid-19 pandemic, which is increasingly troubling. Therefore, researchers are interested in knowing the factors related to basic immunization during the pandemic at PMB Indra Suryaning Kebon Jeruk, West Jakarta.

To prevent this from happening again, prevention is carried out by being aware of Epidemiological Investigations cases in the community, increasing the need for immunization and providing immunizations such as polio at the entrance to travelers from and to Papua and West Papua. The same thing was also done in relation to the potential for transmission of poliovirus type 1 and type 2 from the Philippines and poliovirus type 1 from Malaysia, screening and giving polio immunization to passengers traveling to or from the two countries. This refers to the Circular of the Director General of P2P of the Ministry of Health of the Republic of Indonesia No: HK. 02.02/ii/3074/2019 and No: 5R.03.04/II/2320/2019. Data as of January 23, 2020, a total of 238 passengers from North Sulawesi and North Maluku who will travel to the Philippines received one dose of IPV immunization. In addition, 18 passengers from South Sulawesi who will travel to Malaysia have received OPV immunization.

One of the international commitments to improve the health status of children is the UCI (Universal Child Immunization) program, which is a state of achieving complete basic immunization for infants (children less than one year old). Since 2014 the UCI target in Indonesia has been 100% for every village/kecamatan, this figure is intended to reduce the incidence of PD3I

in Indonesia. According to Law No. 36 of 2009 concerning health, immunization is one of the efforts to prevent the occurrence of infectious diseases which is one of the priority activities of the Ministry of Health as a concrete form of the government's commitment to achieve the Sustainable Development Goals (SDGs) in particular to reduce mortality in children.

Immunization activities were expanded to become the Immunization Development Program (PPI) in order to prevent transmission of several diseases that can be prevented by immunization (PD3I), namely Tuberculosis, Diphtheria, Pertussis, Measles, Polio, Tetanus and Hepatitis B. is a global commitment that must be followed by all countries, namely the eradication of polio, the elimination of measles and rubella and the elimination of maternal and neonatal tetanus. Polio disease is still a health problem in Indonesia, considering that there are still polio cases and outbreaks in several regions in Indonesia. It is important for parents to know why, when, where, and how many times their child should be immunized.

During this COVID-19 pandemic, immunizations must still be completed according to schedule to protect children from PD3I. Immunization services during the COVID-19 pandemic are carried out in accordance with local government policies, based on an analysis of the epidemiological situation of the spread of COVID-19, routine immunization coverage, and the epidemiological situation of PD3I. Immunization services are carried out according to the principles of Infection Prevention and Control and maintain a safe distance of 1-2 meters.

The health office must coordinate and advocate for local governments in immunization services during the COVID-19 pandemic. In addition,

health workers are expected to be able to monitor the immunization status of each target in their working area. In accordance with the Circular of the Minister of Health. The Covid-19 pandemic has an impact on all health services including infant and toddler services, that all infant and toddler services including Posyandu activities are postponed until an undetermined time limit.

Health behavior is an important factor in determining a person's health status. Behavior is a manifestation of a person's attitude and knowledge that is applied in the form of action. Health behavior in a family is strongly influenced by the role of a mother. According to the theory, health behavior is influenced by several factors including facilitation factors, enabling factors, and reinforcing factors.

A mother plays an important role in maintaining the health of her child, so the factors in the mother need to be considered to evaluate health problems in a family. The mother's positive attitude towards immunization will be the basis for the mother's actions to bring her child to immunization services. Other factors such as family support, employment, family income, and the accessibility of the place of service also need to be evaluated. From this description, it shows that factors from the mother play an important role in the completeness of basic immunization in infants.

The purpose of this study in general is to find out the factors related to the completeness of basic immunization during the covid-19 pandemic at PMB I.S Kebon Jeruk, West Jakarta.

Method

Based on the formulation of the problem, the researcher uses a quantitative research type with a cross

sectional study to test the alleged hypothesis on whether there is a difference between one category and another in a sample. In this research is to determine the relationship between the dependent variable, namely basic immunization and independent nutritional status, knowledge, economic level, distance from home.

The hypothesis or basic assumption is a temporary answer to a problem that is still presumption because it still has to be proven true. The hypothesis in this study is that there is a relationship between nutritional status, medical history, knowledge, economic level, distance from home and basic immunization status at PMB I.S Kebon Jeruk, West Jakarta.

The population in this study were mothers of infants 0-12 months who visited PMB I.S Kebon Jeruk West Jakarta as many as 816 people. The sample in this study were mothers of infants 0-12 months who visited PMB I.S Kebon Jeruk, West Jakarta. The number of samples in this study used random sampling. Sampling using the Slovin formula using a simple random sampling technique. The number of samples in this study were 108 mothers of infants.

Result

Univariate Analysis

Table 1. Distribution of the Frequency of Complete Basic Immunizations for Infants at PMB I.S Kebon Jeruk West Jakarta during the 2021 Covid-19 Pandemic

Completeness Basic Immunization	Amount	Percentage
Not complete	51	47.2
Complete	57	52.8
Total	108	100

Based on the table above, it shows that of the 108 respondents who completed basic immunizations, 51 (47.2%) respondents were found to be incomplete, while 57 (52.8%) respondents were complete.

Table 2. Frequency Distribution of Infant Nutritional Status with Complete Basic Immunization for Infants at PMB I.S Kebon Jeruk West Jakarta During the Covid-19 Pandemic Period in 2021

Nutritional Status		
Baby	Amount	Percentage
Not good	8	7.4
Good	100	92.6
Total	108	100

Based on the results in the table above shows that of the 108 respondents whose nutritional status is not good as many as 8 (7.4%) respondents while the nutritional status is good as many as 100 (92.6%) respondents.

Table 3. Frequency Distribution of Infant Health History with Complete Basic Immunization in Infants at PMB I.S Kebon Jeruk West Jakarta During the Covid-19 Pandemic Period in 2021

History		
Baby Health	Amount	Percentage
There is a history of illness	8	7.4
No history of illness	100	92.6
Total	108	100

Based on the results in the table above, it shows that of the 108 respondents whose baby's health history had a history of illness were 8 (7.4%) respondents while those whose baby's health history had no history of illness were 100 (92.6%) respondents.

Table 4. Frequency Distribution of Mother's Knowledge with Completeness of Basic Immunization for Infants at PMB I.S Kebon Jeruk West Jakarta During the Covid-19 Pandemic Period in 2021

Mother's Knowledge		
Knowledge	Amount	Percentage
Not Good	51	47.2
Good	57	52.8
Total	108	100

Based on the results in the table above, it shows that of the 108 respondents whose mother's knowledge was lacking were 51 (47.2%) respondents while those with good mother's knowledge were 57 (52.8%) respondents.

Table 5. Frequency Distribution of House Distance with Basic Immunization Completeness for Infants at PMB I.S Kebon Jeruk West Jakarta During the Covid-19 Pandemic Period in 2021

Home Distance	Amount	Percentage
Far	19	17.6
Close	89	82.4
Total	108	100

Based on the results in the table above, it shows that of the 108 respondents whose houses are far away as many as 19 (17.6%) respondents while those whose houses are close are 89 (82.4%) respondents.

Table 6. Distribution of Economic Level Frequency with Complete Basic Immunization for Infants at PMB I.S Kebon Jeruk West Jakarta During the Covid-19 Pandemic Period in 2021

Economic Level		
Level	Amount	Percentage
Affordable	65	60.2
Unreachable	43	39.8
Total	108	100

Based on the results in the table above, it shows that of the 108 respondents with affordable economic levels, 65 (60.2%) respondents, while 43 (39.8%) respondents with unaffordable economic levels.

Bivariate Analysis

Table 7. The Relationship Between Infant Nutritional Status and Complete Basic Immunization for Infants at PMB I.S Kebon Jeruk West Jakarta During the Covid-19 Pandemic Period in 2021

Nutritional Status Baby	Basic Immunization Equipment			p Value	OR
	Not Complete	Complete	Total		
Not good	2	6	8	0,040	3,100
Good	49	51	100		
Total	51	57	108		

Based on table 7, it is known that of the 8 respondents whose nutritional status is not good, 2 respondents are incomplete and 6 respondents are complete. Meanwhile, from 100 respondents, 49 respondents had good nutritional status, and 51 respondents had complete nutritional status. The

results of the chi square statistic test, obtained p value = $0.040 < (0.05)$ This result data shows that there is a significant relationship between the nutritional status of infants and the completeness of basic immunization in infants and $OR = 3.100$.

Table 8. Relationship Between Infant Health History and Complete Basic Immunization for Infants at PMB I.S Kebon Jeruk West Jakarta During the Covid-19 Pandemic Period in 2021

History Baby Health	Basic Immunization Equipment			p Value	OR
	Not Complete	Complete	Total		
There is a history of illness	2	6	8	0,040	3,100
No history of illness	49	51	100		
Total	51	57	108		

Based on table 8, it is known that from 8 respondents with medical history status, there are 2 respondents who have incomplete medical history and 6 respondents who are complete. Meanwhile, out of 100 respondents with medical history, 49 respondents did not have an incomplete medical history, and

51 respondents had complete medical history. The results of the chi square statistic test, obtained p value = $0.040 < (0.05)$. This data indicates that there is a significant relationship between the health history of infants and the completeness of basic immunization in infants and $OR = 3.100$.

Table 9. The Relationship Between Mother's Knowledge and Completeness of Basic Immunization for Babies at PMB I.S Kebon Jeruk West Jakarta in the 2021 Covid-19 Pandemic

Mother's Knowledge	Basic Immunization Equipment			p Value	OR
	Not Complete	Complete	Total		
Not Good	49	2	51	0,001	2,944
Good	2	55	57		
Total	51	57	108		

Based on table 9, it is known that out of 51 respondents, 49 respondents had incomplete knowledge status of mothers and 2 respondents were complete respondents. Meanwhile, from 57

respondents, 2 respondents had incomplete knowledge of good mothers, and 55 respondents had complete knowledge. The results of the chi square statistical test, obtained p value = 0.001

< (0.05). This result data shows that there is a significant relationship between the baby's health history and the completeness of basic immunization in infants and OR = 2.944

Table 10. The Relationship Between Distance from House to Complete Basic Immunization for Babies at PMB I.S Kebon Jeruk West Jakarta During the Covid-19 Pandemic Period in 2021

Home Distance	Basic Immunization Equipment			p Value	OR
	Not Complete	Complete	Total		
Far	10	9	19	0,044	2,946
Close	41	48	89		
Total	51	57	108		

Based on table 10, it is known that from 19 respondents the incomplete remote home status was 10 respondents and 9 respondents were complete. Meanwhile, out of 89 respondents, 41 respondents had incomplete close proximity to houses, and 48 respondents

were complete. The results of the chi square statistical test, obtained p value = 0.044 < (0.05). This data shows that there is a significant relationship between the baby's health history and the completeness of basic immunization in infants and OR = 2,946.

Table 11. Relationship Between Economic Level and Completeness of Basic Immunization for Infants at PMB I.S Kebon Jeruk West Jakarta During the Covid-19 Pandemic Period in 2021

Economic Level	Basic Immunization Equipment			p Value	OR
	Not Complete	Complete	Total		
Affordable	33	32	65	0,003	1.432
Unreachable	18	25	43		
Total	51	57	108		

Based on table 11, it is known that from 65 respondents with affordable economic levels, 33 respondents were incomplete and 32 respondents were complete. Meanwhile, out of 43 respondents from the unaffordable economic level, 18 respondents were incomplete, and 25 respondents were complete. The results of the chi square statistic test, obtained p value = 0.003 < (0.05) This result data shows that there is a significant relationship between economic level and completeness of basic immunization in infants and OR = 1.432

This result data shows that there is a significant relationship between infant nutritional status and completeness of basic immunization in infants and OR = 3.100.

Infant nutritional status is a nutritional state in infants that can be known by comparing weight for age and body length with a predetermined reference (standard). If the body weight according to age is in accordance with the standard, it is called good nutrition. If slightly below standard Assessment of nutritional status is important to identify both undernutrition and overnutrition and estimate optimum energy intake for growth and health.

Discussion

Baby Nutrition Status

The results of the chi square statistic test, obtained p value = 0.040 < (0.05).

This is in accordance with last research states that the main purpose of giving immunization to a person is to

prevent the occurrence of certain diseases in a person, this is achieved by giving a mild infection that is not dangerous but sufficient to prepare an immune response if contracted by a certain disease, the child does not sick because the body quickly forms antibodies and kills the incoming antigen.

Another research states that Based on the results of the Chi-square test, the p value = 0.001 which means it is smaller than the value (0.05). Thus, it can be said that there is a significant relationship between completeness of immunization and health status in the Watonea village, the working area of the Katobu Health Center, Muna Regency.

Based on the theory above and from the results of the research that has been obtained, the researcher can conclude that immunization is very important to maintain the health status of a child so that they are not susceptible to disease. From the data obtained, most of the children who get complete immunization rarely get sick, this shows that with complete immunization a child can help maintain their immune system from certain diseases.

Baby's Health History

The results of the chi square statistic test, obtained p value = 0.040 < (0.05). This data indicates that there is a significant relationship between the health history of infants and the completeness of basic immunization in infants and OR = 3.100.

Based on the results of the Chi-square test, the p value = 0.001 which means it is smaller than the value (0.05). Thus, it can be said that there is a significant relationship between Infant Health History and Nutritional Status in Watonea Village, the working area of Katobu Health Center, Muna Regency.

This is in accordance with what was stated by Hidayat, 2008 that the Baby's

Health History is an indicator in determining the health status of children. A good baby's health history can help the process of growth and development of children to achieve optimal maturity. Adequate nutrition can also improve the body's resistance so that the body is expected to be free from all diseases. This nutritional status can help to detect early the risk of health problems. Monitoring nutritional status can be used as a form of anticipation in planning for improving the health status of children.

Thus, the researcher can conclude that from the existing theory with the results obtained, it shows that the Infant's Health History can affect the completeness of basic immunization in infants. The less often the child suffers from illness, the better the completeness of basic immunization for infants.

Mother's Knowledge

The results of the chi square statistic test, obtained p value = 0.001 < (0.05). The data from this result indicate that there is a significant relationship between the health history of infants and the completeness of basic immunization in infants and OR = 2.944.

This is because 50% of mothers have good immunization knowledge and good knowledge will make a good understanding so that mothers who have babies or toddlers are fully aware of immunizing their babies, but the results of the study also show that many mothers do not have less knowledge. good.

Knowledge is the result of knowing and this occurs after someone has sensed an object. Sensing occurs through the human senses, namely, the senses of hearing, sight, smell, feeling and touch. Some human knowledge is obtained through the eyes and ears.

Another research says that statistical test results obtained p-value = 0.016 which means p-value < (0.05) so it can

be concluded that there is a relationship between maternal knowledge and the accuracy of basic immunization at the Kotabumi II Health Center South Lampung Utara in 2020 with an OR value 3,984.

Knowledge, attitudes and motivation of parents as well as information about immunization are factors that affect the completeness of basic immunization for infants, therefore it is recommended to health workers to improve health promotion, especially regarding immunization. According to previous research, this study is a factor that is related to the achievement of complete basic immunization, namely the mother's education level, mother's level of knowledge, mother's belief and mother's attitude. Therefore, it is necessary to increase knowledge of mothers through the delivery of information, besides that health workers provide explanations to related mothers after immunization so that mothers believe that immunization has a good impact and mothers are able to behave well towards immunization.

Home Distance

The results of the chi square statistical test, obtained p value = 0.044 < (0.05). This data indicates that there is a significant relationship between the health history of infants and the completeness of basic immunization in infants and OR = 2.946.

Distance is the space between (length or distance) between two objects or two places. Close proximity is a short space between two objects or places. Long distance is a long gap between two places and so on.

Based on the results of statistical analysis using the chi square test, there is a relationship between the distance of health services and the completeness of basic immunization for infants in the work area of the Dulukapa Public Health

Center (pValue <0.05). This study is in line with Mulyanti's research with the title of analyzing the relationship between the distance from home to immunization services and the completeness of basic immunization for toddlers 1-5 years in the working area of the Situgintung Ciputat Health Center that based on the results of the analysis, Based on the results of statistical analysis by using the chi square test, there is a relationship between the distance of health services and the completeness of basic immunization for infants in the work area of the Dulukapa Public Health Center (pValue <0.05).

This study is in line with the research with the title of analyzing the relationship between the distance from home to immunization services and the completeness of basic immunization for toddlers 1-5 years in the working area of the Situgintung Ciputat Health Center that based on the results of analysis with statistical tests obtained p value = 0.000 with a 95% confidence level with a OR = 18,857 (pValue < 0.05).

The distance variable is said to have a relationship with the completeness of basic immunization in infants because based on research, mothers who have distance to affordable services are more fully immunized compared to mothers who have unreachable distances, where the farther the distance traveled to carry out immunization, the more incomplete immunization. in infants because the mother whose house is too far from the place of immunization service will think again and again to come to the place of service.

Because some mothers think that instead of spending money to go to the immunization center, it is better to use the money for daily needs, and vice versa to go to places by walking according to them it will waste time, it is better to use the time for other work, for

example taking care of children. homework.

Economic Level

The results of the chi square statistic test, obtained p value = $0.003 < (0.05)$ this result data shows that there is a significant relationship between health insurance and the completeness of basic immunization in infants and OR = 1.432.

The results of the study showed that in mothers whose per capita income was less than the minimum wage, most of the practice of providing basic immunization to children was complete, namely as much as 78.0%, and in mothers whose per capita income was the minimum wage, all of them provided complete basic immunization to children. his son (100%). Based on the analysis of the data obtained using the Fisher's Exact test, the p value of 1,000 (0.05), it can be concluded that there is no close relationship between income factors and the completeness of immunization for their children in Sumberejo Village, Mranggen District, Demak

Economic growth which shows the extent to which economic activity will generate additional income in a certain period. In other words, the economy is said to have increased if the real income of the community in a certain year is greater than the real income of the community in the previous year

High economic growth and its continuous process are the main conditions for sustainable economic development. Economic growth shows the extent to which economic activity will generate additional income for the community in a certain period.

Summary

This study shows that of the 108 respondents who completed basic immunizations, 51 (47.2%) respondents

were found to be incomplete, while 57 (52.8%) respondents were complete. Nutritional status has a significant relationship with the completeness of infant immunization. This study showed that of the 108 respondents whose nutritional status was not good, 8 (7.4%) respondents, while 100 (92.6%) respondents had good nutritional status. The baby's health history has a significant relationship with the completeness of infant immunization. This study shows that 108 respondents whose baby's health history has a history of illness are 8 (7.4%) respondents while those whose baby's health history has no history of illness are 100 (92.6%).) respondents. Mother's knowledge had a significant relationship with the completeness of infant immunization. This study showed that 108 respondents with poor knowledge of mothers were 51 (47.2%) respondents while those with good maternal knowledge were 57 (52.8%) respondents. Distance from home to health services has a significant relationship with p value = $0.044 < (0.05)$. Ownership of health savings determines the effect of complete basic immunization with the results of 108 respondents with affordable economic levels as many as 65 (60.2%) respondents while those with unaffordable economic levels as many as 43 (39.8%) respondents.

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