

The Timeliness of Basic Immunization in Infants Related To The Knowledge About Covid-19

Brivian Florentis Yustanta*, Layudha Ikhroma

brivianflorentis@gmail.com*, la.yudha@gmail.com

Bachelor of Midwifery Study Program,

School of Health Sciences Karya Husada Kediri, East Java, Indonesia

Abstract. During the covid-19 pandemic, many parents are worried about providing basic immunizations for their infants. This caused the basic immunization coverage at Gandusari Public Health Service in Blitar Regency in April 2020 to decrease by 4.9%, and in May 2020 to decrease by 19.7%. This study objective to determine the correlation of knowledge about covid-19 and the timeliness of basic immunization in infants. This research was analytic correlational with cross sectional study approach. The independent variable was knowledge about covid-19, while the dependent variable was the timeliness of basic immunization in infants. The population were all parents who had infants as many as 87 parents. This study using simple random sampling. The sample size was 71 parents. The instruments were maternal and child health book and questionnaires. The data were analyzed using chi square test. The results showed that p value $0.001 < 0.05$ that there were any correlation of knowledge about covid-19 and the timeliness of basic immunization in infants. The sufficient knowledge of parents about covid-19 made parents hesitate to immunize their infants. Providing basic immunization to infants during a pandemic is not prohibited as long as they comply with health protocols.

Keywords: Timeliness, Basic Immunization, Infant, Knowledge, Covid-19.

1 Introduction

The government has announced Coronavirus Disease 2019 (Covid-19) as a non-natural global disaster or pandemic. Several efforts were made to prevent the spread of the corona virus through social restrictions, including limiting crowds, travel restrictions, imposing isolation, postponing and canceling events, and closing public service facilities [1].

This condition also affects the schedule and procedures for immunization services, both at Integrated Services Post (Posyandu), Public Health Center and at other health facilities, including the private sector. Some parents are worried about giving immunizations for their children. If this condition continues, then the national immunization coverage will decrease, so that herd immunity will not be formed again and in the end this low immunization coverage can cause outbreaks of extraordinary diseases such as Smallpox, Polio, Tuberculosis, Hepatitis B, Diphtheria, Measles and Tetanus. This will be a double burden for community and government in the midst of the ongoing Covid-19 pandemic. So, basic immunization is the most effective and efficient public health effort in preventing several infectious diseases that can be prevented by immunization.

The first quarterly report until March 2020 regarding immunization in East Java with the results of immunization coverage is still far from the minimum target of 24% with a achievement of only 17%. Basic immunization coverage at Gandusari Public Health Center Blitar Regency, decreased by 4.9% in April 2020, and in May 2020 it decreased by 19.7% [2].

Immunization services during the Covid-19 pandemic are implemented according to local government policies, based on an analysis of the epidemiological situation of the spread of Covid-19, coverage of routine immunizations, and the epidemiological situation. Immunization services are carried out in compliance with health protocols and infection prevention principles [3]. 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. Therefore, this study objective to determine the correlation of knowledge about Covid-19 and the timeliness of basic immunization in infants.

2 Method

This research was correlational analytic with cross sectional study approach. The independent variable was knowledge about Covid-19, while the dependent variable was the timeliness of basic immunization in infants. The population in this study were all parents who had infants as many as 87 [4]. This study used simple random sampling. The sample was 71 with inclusion criterias were : 1) Women who lived in the same house with infants, 2) Women can communicate well, 3) Women who have agreed to become respondents. While exclusion criteria was 1) Women who did not have maternal and child health handbooks.

The timeliness of basic immunization in infants was measured by maternal and child health handbooks and while the knowledge about Covid-19 was measured by questionnaires. The research conducted in Tulungrejo Village, Gandusari District, Blitar Regency on June 15th to 26th, 2020. The data was analyzed using chi square test. The results showed that the p-value was $0.001 < 0.05$, that is, there was a correlation of knowledge about Covid-19 and the timeliness of basic immunization in infants. The result of the contingency coefficient test of 0.371 means that knowledge about Covid-19 with the timeliness of basic immunization in infants has a low correlation [5].

3 Results and Discussion

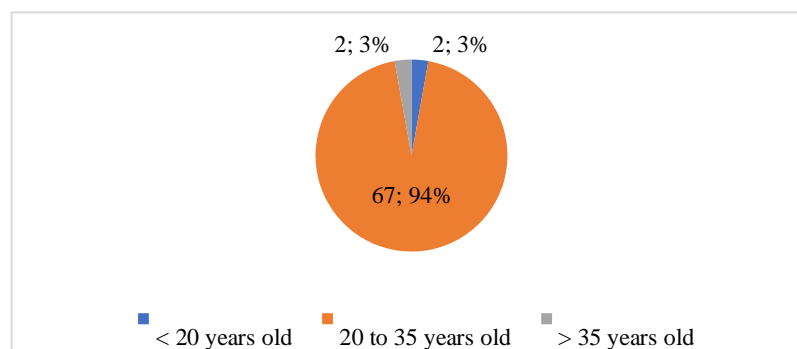


Fig 1. Women's Age

Based on figure 1, it was found that out of 71 respondents it showed that a number of 67 respondents (94%) were 25-35 years old. Age 20 - 35 years is the productive age and includes the age of the millennial generation. Millennial generation is a generation born in the early 1980's to mid 1990's. Millennial generation is a generation that is highly curious. One of the challenges of the millennial group is the presence of information technology. On the one hand, it can have a positive impact, namely the faster the millennial generation can access various information, knowledge, and ultimately increase insight and knowledge. However, on the other hand, information technology can have a negative impact, for example, the millennial generation can easily access misleading information or hoax [6].

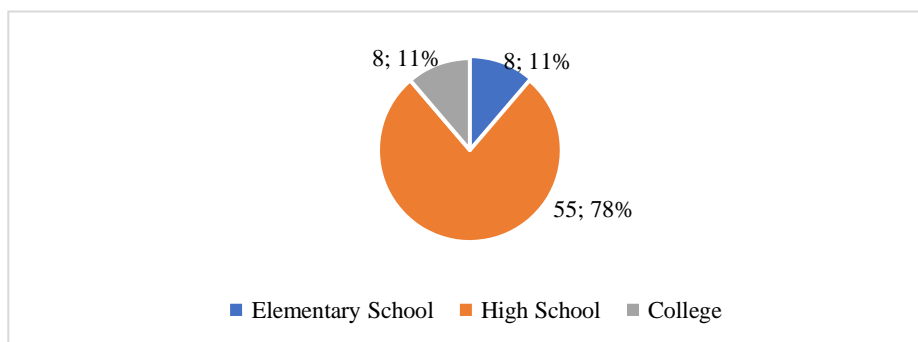


Fig 2. Women's Latest Education

Based on figure 2, it was found that out of 71 respondents it showed that a number of 55 respondents (78%) were had high school latest education. Knowledge is closely related to the latest of formal education. That matter hints that by the higher education is also expected the wider or the higher one's level of knowledge [7]. But the low education also cannot absolute disconnect that someone have low knowledge also. This can be caused because knowledge is not only obtained by formal education, but it can be with non education formal [8].

Now all kinds of information can be obtained through social media. Today, social media has become a part of lifestyle. People take advantage of social media as a means to share and find information about all things about their daily lives [9]. Not only that, social media can also function as media for sharing news, knowledge and information so as to increase knowledge.

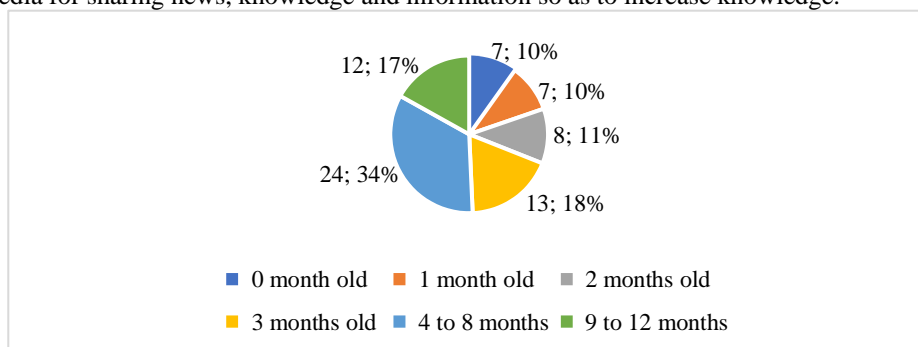


Fig 3. Infant's Age

In the early stages of life, infants are very susceptible to dangerous diseases, such as acute respiratory diseases, polio, hepatitis, tetanus, measles and many other dangerous diseases. Infants affected by these diseases have a high risk of death. If they do not die, the virus and disease will cause prolonged physical and mental suffering and can even cause disability [10].

By providing Complete Basic Immunization on a schedule, the infant's body are stimulated to have immunity so that they body can defend against dangerous diseases. Complete Basic Immunizations must be fulfilled before they are 12 months old [11].

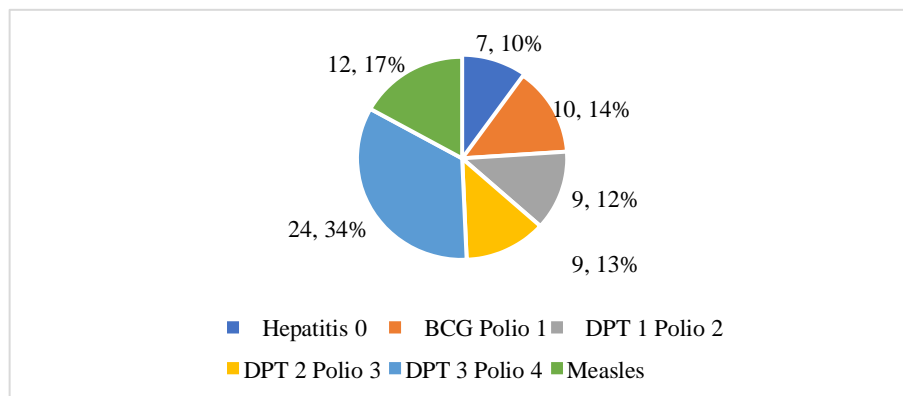


Fig 4. Types of Immunization

In the maternal and child health handbook, not only does it contain growth and development chart, there is also a table that lists what types of immunizations in infants should get and at what age immunizations should be done. One of the important things about immunization which can have dangerous consequences if it occurs is immunization that is not according to the schedule and age of the child [12]. The immunization schedule is made based on the course of the disease, so that when it is given too late, the results are not optimal.

Infants are still at risk for disease, such as what happened in the outbreak of diphtheria last year. Even though it's late, they still have to be immunized. It is not too late then they don't have to, so consult with midwife or doctor about the schedule [13].

Table 1. Knowledge About Covid-19

Nr	Knowledge	Count	%
1	Poor	5	7
2	Intermediate	8	11
3	Good	58	82
	Total	71	100

Based on table 1, it was found that out of 71 respondents it showed that a number of 58 respondents (82%) had good knowledge about Covid-19. Knowledge is one of the important things to pay attention to in the context of handling the Covid-19 case. Cellular communication networks, cell phones, the internet, and various applications are vehicles as well as bridges that facilitate the dissemination of information from one person to another and groups of people [14].

Knowledge is one of the important things to pay attention to in the context of handling the Covid-19 case. Public knowledge, especially in preventing the transmission of the SARS-CoV-2 virus, is very useful in suppressing transmission of the virus. By having a good knowledge of something, person will have the ability to determine and make decisions about how they can deal with it [15].

Table 2. Timeliness of Basic Immunization

Nr	Timeliness	Count	%
1	Not On Time	9	13
2	On Time	62	87
	Total	71	100

Based on table 2, it was found that out of 71 respondents it showed that a number of 62 respondents (87%) have immunized on time. There are immunizations that are enough to be done only once, some are done repeatedly. This is why it is important for parents to observe and adhere to the family immunization schedule. The immunization schedule itself is made based on recommendations from WHO and other professional organizations involved in immunization after going through clinical trials. Therefore, don't miss a schedule. If missed or there are immunizations that have not been given, it needs to be given immediately and pursued [16].

Table 3. Correlation Knowledge About Covid-19 with Timeliness of Basic Immunization

Nr	Knowledge	Timeliness of Immunization				Total	
		Not on time		On time		Count	%
		Count	%	Count	%		
1	Poor	4	5.5	1	1.5	5	7
2	Intermediate	4	5.5	4	5.5	8	11
3	Good	1	1.5	57	80.5	58	82
	Total	9	12.5	62	87.5	71	100
Chi Square Test : $0.001 < 0.05$ (Correlated)							
Contingency Coefficient Test : 0.371 (Low correlation)							

Based on table 3, it was found that 1 respondent with good knowledge but not on time immunization because she was prohibited by her husband and family. There was also 1 respondent with poor knowledge but on time due to comply the advice of the midwife. The data analysis using Chi Square Test with p-value was $0.001 < 0.05$ and Contingency Coefficient Test was 0.371. It means there was any correlation between knowledge about Covid-19 with the timeliness of basic immunization in infants with a low correlation.

The status of Gandusari District, Blitar Regency, was an orange zone. During a pandemic, immunization activities are still carried out by implementing the health protocols. Integrated Services Post (Posyandu) activities also continued during the pandemic. All information regarding the immunization schedule was given by the midwife through the WhatsApp group, so that even though they did not meet in person, the information was still maintained. Cadres do the weighing and measuring body length by door to door. Once a month an immunization is held, of course, by still adhering to the established health protocols [17].

Based on the risk assessment and mapping in Tulungrejo Village, Gandusari District, Blitar Regency, immunization services can be carried out at Integrated Services Post (Posyandu), Public Health Center, mobile health centers or other health facilities that provide immunization

Procedia of Social Sciences and Humanities

Proceeding of the International Conference on Intellectuals' Global Responsibility 2020 (ICIGR):
Science for Handling the Effects of Covid-19, Facing the New Normal, and Improving Public Welfare

services. Immunization services are still carried out according to the schedule and principles of Infection Prevention and Control.

To increase the reach and quality of services for people in the work area of the Public Health Center that have not been reached by services in the Public Health Center building for various reasons, such as difficulties in carrying out immunization services at the Public Health Center or Integrated Services Post or people's doubts about bringing them to the Public Health Center for fear of Covid-19 transmission, it can be done mobile health services in the form of mobile health center activities.

Meanwhile, the principles that become a reference in implementing the immunization program during the Covid-19 pandemic, namely: 1) Basic and advanced immunizations are still attempted to be complete and implemented according to schedule to protect children from diseases that can be prevented by immunization, 2) Operationally, services immunization at Integrated Services Post, Public Health Center, mobile health centers and other health facilities that provide immunization services following local government policies; 3) Disease surveillance activities that can be prevented by immunization must be optimized, including reporting, and 4) Applying the principles of Infection Prevention and Control and maintaining a safe distance of 1 to 2 meters. Service hours should not be long and limit the number of targets served in one service session. If the number of targets is large, divide it into several posyandu service sessions so that there is no accumulation or crowds of people. If possible and the target is quite a lot of Integrated Services Post services can be done more than once a month.

Some of the health protocols that are implemented at the time of immunization include 1) Ensuring that the service room / place is clean by cleaning before and after service with disinfectant liquid, 2) Providing facilities for washing hands using soap and running water or hand sanitizer, 3) Arranging service desks between officers and parents to keep a safe distance of 1 to 2 meters, 4) Immunization service rooms or places are only for serving healthy babies and children. 5) Providing separate entry and exit points for immunization targets and delivery people with sick puskesmas visitors, 6) Arranging for immunization targets and delivery people in and out, 7) Providing seats for immunization targets and parents to wait before and 30 minutes after immunization with a safe distance between seats 1 to 2 meters, 8) Arrange for a separate place or target waiting room before and after immunization.

Terms and condition for infants to be immunized is ensure that the child is in a healthy condition to be immunized. If the child is sick, such as fever, cough, runny nose, diarrhea, there is a history of contact with asymptomatic or confirmed of Covid-19 and others, immediately contact health workers to delay and reschedule after the child is healthy again. Ensure that parents or caregivers are in good health to the Integrated Services Post (no coughs, colds, fever, etc.) and also there is no history of contact with asymptomatic or Covid-19 confirmation. Use cloth masks for parents or caregivers to Public Health Center or other health facilities and bring a maternal and child health handbook or a child's immunization record book.

Meanwhile, immunization services can be postponed and require midwife (assisted by health cadres) to record children who have not received immunization services to be prioritized at the first opportunity immunization services can be provided. The efforts of parents or caregivers to get immunizations for children with parents or family members is asymptomatic and has a risk of transmitting Covid-19 to others. Therefore, immunization must be postponed until the family member in the asymptomatic category has completed self- quarantine for at least 14 days and until it is declared negative for Covid-19 as evidenced by the results of the RT-PCR examination for two consecutive days showing negative results. If the RT-PCR examination is not possible, then the child can only be immunized after the family member in the

Procedia of Social Sciences and Humanities

Proceeding of the International Conference on Intellectuals' Global Responsibility 2020 (ICIGR):
Science for Handling the Effects of Covid-19, Facing the New Normal, and Improving Public Welfare

asymptomatic category has carried out self-quarantine for at least 14 days and still has no symptoms or is healthy.

Health workers need to carry out default tracking of children who have been delayed from immunization due to the Covid-19 pandemic to plan intervention activities (catch up) as soon as the situation allows. Tracking result intervention activities can be in the form of sweeping, drop out follow up (DOFU), or crash program. In areas that are difficult to reach, the Sustainable Outreach Service (SOS) strategy can be applied to carry out interventions. The timing of the catch-up activity is adjusted to the recommendation of an epidemiologist, which is related to the Covid-19 transmission situation. Planning for catch-up activities also needs to consider the capacity of health workers and parents' trust in giving multiple immunizations.

4 Conclusion

Even during the Covid-19 pandemic, which has infected most countries, it should not dampen the enthusiasm of health workers to continue to echo the importance of immunization and take important steps to ensure that every child who is a vulnerable group is protected from dangerous diseases by immunization. During the current Covid-19 pandemic, immunization services as one of the essential health services should remain a priority to be implemented.

Complete immunization must be carried out according to schedule to protect children from diseases that can be prevented by immunization. Immunization services during the Covid-19 pandemic are implemented according to local government policies, based on an analysis of the epidemiological situation of the spread of Covid-19, coverage of routine immunizations, and the epidemiological situation.

The types of risks that may occur during the implementation of routine immunization during the Covid-19 pandemic can also be anticipated in advance, for example, parents' doubt to come to health facilities because they are doubtful about the quality of service they will receive during the Covid-19 pandemic or fear of danger transmission of Covid-19, as well as parents' doubts about the double immunization their child will receive. Health workers are also expected to be able to explain the fever that occurs after immunization and distinguish it from fever as one of the main symptoms of Covid-19, so that key messages can be prepared in case of rejection or doubt.

Acknowledgement

The author gives thanks alhamdulillah to Allah SWT. The author also expresses his gratitude to LPPM School of Health Sciences Karya Husada Kediri, Bachelor of Midwifery Study Program School of Health Sciences Karya Husada Kediri who have provided research funding support and moral support for this research.

Procedia of Social Sciences and Humanities

Proceeding of the International Conference on Intellectuals' Global Responsibility 2020 (ICIGR):
Science for Handling the Effects of Covid-19, Facing the New Normal, and Improving Public Welfare

References

- [1] Direktorat Jenderal Kesehatan Masyarakat. 2020. *Panduan Pelayanan Kesehatan Balita Pada Masa Tanggap Darurat COVID-19 bagi Tenaga Kesehatan*.
- [2] WHO. 2020. *Guiding Principles for Immunization Activities for Immunization Activities during the COVID-19 Pandemic*.
- [3] WHO. 2020. *Immunization in the Context of COVID-19 Pandemic*.
- [4] *General Best Practice Guidelines for Immunization: Altered Immunocompetence*.
- [5] Peraturan Menteri Kesehatan Nomor 12 Tahun 2017 tentang Penyelenggaraan Imunisasi.
- [6] Kementerian Kesehatan. 2019. Peraturan Menteri Kesehatan Nomor 43 Tahun 2019 tentang Pusat Kesehatan Masyarakat.
- [7] Keputusan Menteri Kesehatan Republik Indonesia Nomor HK.01.07/MENKES/104/2020 tentang Penetapan Infeksi Novel Corona Virus (Infeksi 2019 nCoV) sebagai Penyakit yang dapat menimbulkan Wabah dan Upaya Penanggulangannya.
- [8] Surat Edaran Menteri Dalam Negeri Nomor 094/1737/BPD tanggal 27 April 2020 tentang Operasional Pos Pelayanan Terpadu (Posyandu) dalam Pencegahan Penyebaran COVID-19
- [9] Surat Edaran Dirjen P2P Nomor SR.02.06/4/1332/2020 tanggal 24 Maret 2020 tentang Pelayanan Imunisasi Pada Anak selama masa Pandemi Corona Virus Disease 2019.
- [10] Surat Edaran Dirjen P2P Nomor HK.02.03/III/5703/2020 tanggal 22 April 2020 tentang Pelaksanaan Pencegahan dan Pengendalian Hepatitis B dan Hepatitis C dalam Situasi Pandemi COVID-19.
- [11] Direktorat Jenderal Pencegahan dan Pengendalian Penyakit. 2020. *Pedoman Pencegahan dan Pengendalian Corona Virus Disease (COVID-19)*.
- [12] Gugus Tugas COVID-19. 2020. *Kesiapsiagaan dan Layanan Esensial Yanke Primer*.
- [13] Direktorat Jenderal Pelayanan Kesehatan. 2020. *Petunjuk Teknis Pelayanan Puskesmas Pada Masa Pandemi COVID-19*.
- [14] Royal College of Paediatrics and Child Health. 2002. *Immunization of the immunocompromised child*. Best practice statement.
- [15] Saskatchewan. 2020. *Paediatric Immunocompromised Patient. COVID-19 Information*.
- [16] WHO – UNICEF. 2020. *Community-based Health Care, including Outreach and Campaigns, in The Context of The COVID-19 Pandemic*.
- [17] Dolan, Samantha et al. 2015. Summary of evidence on the administration of multiple injectable vaccines in infants during a single visit: safety, immunogenicity, and vaccine administration practices. Prepared for the 2015 SAGE Meeting.