JURNAL MEDIA PENELITIAN DAN PENGEMBANGAN KESEHATAN
Vol 33 No 3, September 2023

DETERMINANTS OF COMMUNITY HEALTH CENTRE BASIC IMMUNIZATION PROGRAM ACHIEVEMENT DURING THE COVID-19 PANDEMIC: A MIXED METHODS STUDY FROM TABANAN REGENCY

Determinan Capaian Program Imunisasi Dasar Puskesmas Pada Masa Pandemi Covid-19: Studi Metode Campuran

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ABSTRAK

Imunisasi adalah salah satu strategi pencegahan kesehatan masyarakat yang paling hemat biaya di semua tingkat sosioekonomi. Pada tahun 2020, pada saat pandemic COVID-19, capaian imunisasi di wilayah Kabupaten Tabanan, Bali, mengalami penurunan, bahkan pada tahun 2021 terdapat 3 puskesmas di wilayah Kabupaten Tabanan yang capaian imunisasinya di bawah 50 %. Tujuan penelitian ini untuk mengidentifikasi faktor-faktor yang mempengaruhi pencapaian program imunisasi dasar Puskesmas di Kabupaten Tabanan, Provinsi Bali selama pandemi COVID-19. Penelitian ini menggunakan rancangan metode campuran (mixed method), studi kuantitatif dan kualitatif, untuk mengidentifikasi faktor-faktor yang mempengaruhi Capaian Program Imunisasi Dasar Puskesmas pada Masa pandemi COVID-19 di Kabupaten Tabanan. Survei kuantitatif dan wawancara semi-terstruktur menilai perspektif 100 ibu yang memiliki anak di bawah 12 bulan dan 5 penyedia layanan kesehatan. Hasil penelitian menunjukkan bahwa sikap ibu dan dukungan keluarga merupakan faktor yang paling mempengaruhi status imunisasi dasar lengkap di Puskesmas Kabupaten Tabanan. Masih terdapat kesalahan informasi mengenai dampak negatif imunisasi terhadap masyarakat di salah satu Puskesmas di Kabupaten Tabanan. Pengawasan pada saat pemberian imunisasi perlu ditingkatkan sehingga dapat meminimalisir tindakan anti vaksin, dan juga memberikan edukasi kepada masyarakat mengenai pentingnya imunisasi. Perencanaan pelaksanaan imunisasi dasar dengan menggunakan sistem clustering dan sistem monitoring dan evaluasi dengan pendekatan teknologi informasi dapat diterapkan pada situasi pandemi COVID-19.

Kata Kunci: *program imunisasi dasar, puskesmas, metode campuran, COVID-19*

ABSTRACT

Immunization is one of the most cost-effective public health prevention strategies at all socio-economic levels. In 2020, at the time of the COVID-19 pandemic, access to immunization in the Tabanan district, Bali, had declined; even in 2021, there are 3 public health centers in Tabanan District that have immunization rates below 50%. The aim of this study is to identify the factors that affect the achievement of the basic immunization program of the public health center in Tabanan County, Bali Province, during the COVID-19 pandemic. The study uses a mixed-methods design, quantitative and qualitative studies, to identify the factors that affect the achievements of the Public Health Canter Basic Immunization Program at the time of the COVID-19 pandemic in Tabana District. Quantitative surveys and semi-structured interviews assessed the perspectives of 100 mothers with children under 12 months and 5 healthcare providers. The results of the research show that the attitude of the mother and the support of the family are the most influential factors affecting the status of complete basic immunization in the public health

canters in the Tabanan district. There is still misinformation about the negative impact of immunization on the population at one of the public health canters in Tabanan district. Immunization monitoring needs to be strengthened to minimize anti-vaccination action and to educate the public about the importance of immunization. Planning the implementation of basic immunization using clustering systems and monitoring and evaluation systems with information technology approaches can be applied to the COVID-19 pandemic situation.

Keywords: basic immunization program, community health centre, mixed methods, COVID-19

INTRODUCTION

Immunization is one of the most cost-effective public health preventive strategies in all socioeconomic levels [1]. Immunization is a fundamental component of the primary healthcare system and is unquestionably a human right [2]. The global scale up of immunization programs began with the establishment of EPI in 1974 by the World Health Assembly (WHA) [3]. Immunization is a primary prevention effort to avoid illness or events that could result in someone getting sick or suffering from injury or disability. Globally, the COVID-19 pandemic has had an influence on people's lives and means of subsistence. The Covid-19 Pandemic period was a very worrying time for immunizing children at health facilities because they were afraid of contracting the corona virus or for other reasons, especially for mothers with toddlers.

Indonesia has implemented a systematic vaccination program since 1956 and was declared free of smallpox in 1974. Vaccination activities developed into the Immunization Development Program in 1977 to prevent infection with immune preventable diseases such as tuberculosis, diphtheria, whooping cough, polio, tetanus and hepatitis B. Technological developments and telecommunications, especially in the health sector, have also improved the quality of vaccination services, as marked by the discovery of several new vaccines, such as rotavirus and Japanese encephalitis. In addition, several types of vaccines have been combined as combination vaccines which have been proven to increase vaccination rates, reduce injections and reduce contact with staff through technological development. Indonesia has implemented a systematic vaccination program since 1956 and was declared free of smallpox in 1974 [4].

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One of the main objectives of Millennium Development Goal 4 is to lower the death rate among children. The all-cause mortality rate for children under five years old decreased by 47% between 2000 (9.7 million deaths) and 2019 (5.2 million deaths) [6]. Countries stepped up measures to halt the historically low vaccination rates caused by the COVID-19 epidemic, resulting in 4 million more children being immunized in 2022 compared to the previous year. According to data released today by UNICEF and the World Health Organization (WHO), 20.5 million children in 2022 did not receive one or more vaccinations through routine immunization services, compared to 24.4 million in 2021. Despite this progress, there is still a greater number of children who did not benefit from the program compared to the 18.4 million left out in 2019 due to pandemic-related disruptions, highlighting the need for further efforts to recover lost time, rebuild the system, and enhance it [7].

Immunization is one of the most cost-effective public health prevention strategies at all socio-economic levels. In 2020, at the time of the COVID-19 pandemic, access to immunization in the Tabanan district, Bali, had declined; even in 2021, there are 3 public health centers in Tabanan District that have immunization rates below 50%. The aim of this study is to identify the factors that affect the achievement of the basic immunization program of the public health center in Tabanan County, Bali Province, during the COVID-19 pandemic. The study uses a mixed-methods design, quantitative and qualitative studies, to identify the factors that affect the achievements of the Public Health Center Basic Immunization Program at the time of the COVID-19 pandemic in Tabana District. Quantitative surveys and semi-structured interviews assessed the perspectives of 100 mothers with children under 12 months and 5 healthcare providers. The results of the research show that the attitude of the mother and the support of the family are the most influential factors affecting the status of complete basic immunization in the public health centers in the Tabanan district. There is still misinformation about the negative impact of immunization on the population at one of the public health centers in Tabanan district. Immunization monitoring needs to be strengthened to minimize anti-vaccination action and to educate the public about the importance of immunization. Planning the implementation of basic immunization using clustering systems and monitoring and evaluation systems with information technology approaches can be applied to the COVID-19 pandemic situation.

Of the 20.5 million children who missed one or more doses of the DTP vaccine in 2022, 14.3 million—referred to as "zero-dose children"—did not receive a single dose of the vaccine. A further 35.2 million children are at risk of contracting measles because the measles vaccination, which protects against one of the most dangerous viruses, has not recovered as quickly as other vaccines. Despite increasing from 81% in 2021 to 83% in 2022, first-dose measles coverage fell short of the 86% achieved in 2019. Due to this, 13.3 million children missed their second dose of the measles last year, which is 2.7 million more than in 2019, and 21.9 million children missed their first dose, putting children in areas with poor vaccination rates in danger of outbreaks [7].

Some studies reported factors affecting immunization coverage. People worried about contracting COVID-19 in healthcare facilities while services were provided, worried about getting the virus in waiting areas, and tried to avoid coming into touch with COVID-19 patients [8]– [10] .They also found it difficult to leave their homes, encountered transportation problems, and had their movements limited because of citywide lockdowns [11]. Another factor was worries about adding to the strain on the already overburdened health care system [12]. Health professionals were also not available in some areas because to travel limitations, redeployment to COVID-19 response activities, and a shortage of protective gear [13]. Additionally, closing educational facilities had a significant impact on the delivery of RI services that had previously taken place in school setting [10],[14][15],[16]. The aim of the study was to identify the factors that influence identify factors that influence Community Health Centre Basic Immunization Program Achievement during the COVID-19 Pandemic in Tabanan regency.

METHODS

This study uses several theoretical approaches in the development of the research variables, namely the theory of healthy behaviour change, the health seeking behaviour theory, the health care seeking behaviour theory, and the precedence-proceed theory by Lawrence Green. From the behavioural change theories, the variables included: predisposing factors: age, culture, educational level, employment status, knowledge, attitude, Reinforcing Factor: Attitudes and behaviours of health support officers, and Enabling Factors means, cost perception, perception Besides, there are also variables in policy, regulatory, organizational, construct, educational, and environmental development. According to the variables of the research, the research instruments are formulated in the form of a questionnaire for quantitative studies and an interview guide for qualitative studies.

Setting

This mixed-methods study (quantitative and qualitative) evaluated mothers of children under 12 months and health provider perceptions of the Immunization Program Achievement during the COVID-19 Pandemic through semi-structured interviews and surveys, which are detailed below. This study was conducted at three Community Health Centres in Tabanan Regency: Selemadeg, East Selemadeg 2, and Pupuan 2 from April to July 2022. The Study activities were approved and monitored by 1508/Sket/Ka-Dept/RE/UIMA/VIII/2022 from Health research ethics committee of Indonesia Maju University, Jakarta, Indonesia. Written informed consent for the use and release of individually identifiable health information were obtained from all the participants.

The quantitative study was first conducted by conducting interviews using a questionnaire with 100 mothers who have children under 12 months to find out the factors that hinder the regulation of compulsory immunization at the Public Health Center in Tabanan District. The sampling method in this study was random sampling. The qualitative study using in-depth interviews was conducted with the Head of Health Department of Tabanan District, Head of the Field of Disease Control or Health of Mother and Child Health Service in Tabanan District, in charge of the immunization program, Chief of Public Health Center Selemadeg, Selmadeg East 2, and pupuan 2, in order to obtain information on immunization regulation and public awareness in the Public Health Centre of Tabana district.

Recruitment

Respondents

Respondents were patients who came to three Community Health Centres in Tabanan Regency were invited to participate in the study. The eligible and interested participants were randomly. The samples were patients who came to three Community Health Centres in Tabanan Regency, who met the following criteria: mothers with children under 12 months of age, mothers could communicate, and mothers was willing to fill out the questionnaire. The sampling method in this study was random sampling.

Exclusion criteria were mothers who received services at three community health centres and did not fill out the questionnaire completely, and mothers who had children under 12 months of age who were sick for a long time and could not interact adequately. Slovin's sample size formula is used to calculate the minimum number of samples required. From this formula, the minimum sample size was 100 respondents.

Providers

To assess the provider perspective, we interviewed health providers: Head of the Tabanan District Health Service, Head of the P2P/KIA Division of the Tabanan District Health Service, Person in Charge of the Immunization Program, Head of Community Health Center; Selemadeg, East Selemadeg 2, and Pupuan 2, Manager/executor of the immunization program at the Selemadeg Health Centre, East Selemadeg 2, and Pupuan 2, and with snowball sampling.

A qualitative study focused on data and emphasized validity aspects. Validation test using triangulation data to reliability test That was, viewing data from different paths at different times. The triangulation reliability test selected is triangulating using techniques and data sources. After that, a content analysis was performed to see the content of information from some informants.

Procedures

Respondents

Quantitative data was collected from mothers who had children under 12 months of age who sought treatment at the community health center at the research location using a structured questionnaire. A total of 100 respondents were sampled in this study. Before

respondents fill out the questionnaire, the researcher first explains how to fill out the consent form which is filled in by the respondent, then the researcher explains how to fill out the questionnaire. Respondents took 20 minutes to fill out the questionnaire. If respondents have difficulty reading or do not understand the questions, they can ask the researcher for help.

Quantitative study questionnaires contained information about immunization and the characteristics of mothers that include the mother's age, education of the mother, maternal employment, parity, mother knowledge, mother attitude, information on immunization schedules, distance to health care facilities, family support, mother confidence, and income level.

Providers

Qualitative data collection was carried out by in-depth interviews with health service providers using interview guides. Researchers conducted direct interviews with each informant. The results of the interview were written and recorded and then a transcript of the interview results was made. The interview guide for informants contained regulations for the implementation of basic immunization in Puskesmas Tabanan district, Bali Province.

Data Analysis

Quantitative Surveys

The validity of quantitative data was carried out by calculating Pearson correlation. If the significant value was <5% (0.05) then it could be concluded that the instrument item was valid. Testing the reliability of this research used the Cronbach Alpha (α) statistical test. A variable was reliable if the Cronbach Alpha (α) value was > 0.6. The survey data were analysed using descriptive statistics and multivariate analysis using logistic regression in SPSS. The multivariate logistic regression model employed a backward stepwise analysis. In the backward selection model, we included all candidate variables in the model with $p < 0.25$ in selecting the final model. At each step, the variable that is the least significant is removed. The significance level was set at 95% at which variables can be removed from the model.

Qualitative Interviews

Qualitative data validation tests were carried out by triangulating sources. Source triangulation was carried out by checking data that had been obtained through several informant sources. In this study there were five informants as data sources. Data from in-depth interviews were compiled into transcripts.

The interview transcripts were examined using a hybrid approach of deductive and inductive coding and topic creation [17],[18]. The researchers gathered to conduct a theme analysis when the coding procedure was complete. To enable comparison across the data set, pattern recognition, the creation of themes, and an analysis of the relationships between the themes, the coded data were summarized into an Excel matrix arranged using the codes. For the provider transcripts, this process was repeated.

The interview transcripts were analysed utilizing a hybrid approach of deductive and inductive coding and theme development [17], 18]. Upon completion of the coding process, the researchers met to engage in a thematic analysis. The coded data were summarized into an Excel matrix organized using the codes to allow for comparison across the data set, the identification of patterns, the generation of themes, and the examination of the relationships between the themes. This process was repeated for the provider transcripts.

Mixed-Methods Integration

We combined the quantitative and qualitative data at the "interpretation and reporting" levels through a narrative and joint display, in accordance with best practices for mixed-methods research [17]. The qualitative and quantitative findings in a single report or series of studies are described through integration through a narrative [19]. Here, we present the findings in a single report and employ a contiguous method, in which the quantitative and

qualitative findings are reported in various sections within the results [19]. Our explanation of the integrated analysis is structured using a joint display [20].

RESULTS

Respondents

Table 1 shows most of the respondents were 21-35 years old (44%), all were female (*n* = 100, 100%), had low education (58.2%), had working status (65.9%), and gotten married (81.3%).

Table 1. Respondents Characteristics (n= 91)

Characteristics	n	%
Mother's Age (years)		
< 20 years	26	28.6
21-35 years	40	44
>36 years old	25	27.5
Mother's Education		
Lower Education	53	58.2
Higher Education	38	41.8
Mother's Occupation status		
Unemployed	31	34.1
Employed	60	65.9
Parity		
1-2	42	46.2
> 3	49	53.8

Table 2. Several Dominant Factors of Community Health Centre Basic Immunization Program Achievement During The COVID-19 Pandemic

Variable	Adjusted Odds ratio*	95% confidence interval	P
Age	82,701	1,971 - 3470.49	0,021
Education	21,078	1,314 – 338.18	0,031
Work	476,123	0,499 – 2000.01	0,078
Parity	9,031	0,148 – 551.08	0,294
Knowledge	0,099	0,002	0,249
Attitude	2,465	0,116	0,563
Schedule Information	29,930	0,700	0,076
Mileage	34,609	0,525	0,097
Family support	0,029	0,000	0,212
Belief Mother	0,218	0,011	0,318
Income Level	0,031	0,000	0,174
Internet access	8,232	0,056	0,409
Marital status	0,618	0,006	0,836

Table 2 shows age and level education of the respondents were dominant factors of Community Health Centre Basic Immunization Program Achievement during the COVID-19 Pandemic. Respondents who were older were 2 times or more likely to take their children to the community health center to be immunized.

Provider

The providers were health providers: Head of the Tabanan District Health Service, Head of the P2P/KIA Division of the Tabanan District Health Service, Person in Charge of

the Immunization Program, Head of Community Health Center; Selemadeg, East Selemadeg 2, and Pupuan 2, Manager/executor of the immunization program at the Selemadeg Health Centre, East Selemadeg 2, and Pupuan 2.

Seven providers participated in this study; their mean age was 42.4 years (SD =12.3) and 71.4% (n = 7) were female. The informants were head of the community health centre from Pupuan 2 (n = 1), East Selemadeg 2 (n=1), and Pupuan 2 (n = 1), head of the Tabanan District Health Service (n=1), implementer and Immunization Coordinator at Pupuan 2 Health Centre (n=1), Implementer and Coordinator of Immunization at East Selemadeg 2 Community Health Centre (n=1), and Implementer and Coordinator of Immunization at Pupuan 2 Community Health Center (n=1).

Legal Responsibilities in Implementing Mandatory Immunization Programs.

The government is responsible for setting targets for the number of people to be immunized, age groups, and procedures for administering the vaccine to those targeted. The implementation of the immunization program is carried out by the National Health Service Unit and is regulated by Minister of Health Regulation Number 12 of 2017 concerning the Implementation of Immunization. The following are the official responsibilities of the Health Service for Immunization Health Services at Community Health Centres, Tabanan Province:

a. Planning

It is a very important activity that must be carried out properly by professionals.
on an interview with the head of the Tabanan District Health Service, he said:

> "The vaccination implementation plan will be carried out through surveillance, including technical planning. Determine the target number based on predicted data, then the logistics of determining the number of vaccinations required and planning the required vaccinations per antigen are based on routine infant activities and BIAS (School Child Immunization Month)".

Based on the results of the interview above, the Tabanan District Health Service appears to be responsible for planning the immunization program. Implementation of a technical planning system, namely target planning, logistics planning and financing. Community health centres are the front line of services and are funded by the regional government, except for some goods which are supplied by the centre. Community Health Centres is responsible for providing accountability reports to the Regency/City, State and Centre.

Comprehensive cross-sector and cross-program planning is needed to support the continuity of immunization activities. Planning immunization activities requires information that can describe the status of success and immunization resources as well as the goals to be achieved in the future according to the Ministry of Health's Strategic Plan. Following this plan, the required budget should be made into a comprehensive planning unit.

b. Providing, Distributing and Storing Logistics.

After the logistics plan is implemented, logistics must be provided, distributed, and stored so that it is not damaged. This process must be carried out in accordance with the regulatory provisions set by the Government and each agency has different responsibilities. The following is the responsibility for providing logistics carried out by the Health Service to the Selemadeg, Pupuan 2 and East Selemadeg 2 Health Centres:

> "The Tabanan District Health Office in the Immunization Program provides logistics other than vaccines, consumable equipment such as ADS, safety boxes, taking district logistics to the Bali Province Health Office once a month or according to needs if at any time changes are needed."

This statement was confirmed by the Selemadeg Health Center, Pupuan 2, East Selemadeg 2 Health Center who stated that:

> "The logistics have been completely provided by the health service, providing vaccines, ADS, safety boxes and cold chain equipment in the form of vaccine storage equipment, including cold rooms, freezer rooms, vaccine refrigerators and freezers; 2) Vaccine transportation equipment, including special refrigerated vehicles, cold boxes, vaccine carriers, cool packs and cold packs; and 3) temperature monitoring devices, including thermometers, thermographs, freezing temperature monitoring devices, continuous temperature monitoring/recording devices, and alarms".

The same thing was expressed by the Immunization Implementer and Coordinator as the fifth, sixth and seventh informants who revealed that:

> "All equipment has been provided by the ADS Health Service, safety boxes and cold chain equipment".

After providing logistics, the Health Service is responsible for carrying out distribution to the Selemadeg, Pupuan 2, and Selemadeg Timur 2 Health Centres. The following is the statement from the head of the Tabanan District Health Service:

> "The distribution mechanism is carried out by delivery by districts/cities or picked up by the Community Health Centre and then based on an official request from the Community Health Centre, taking into account the maximum stock and storage capacity of the vaccine, using a cold box or vaccine carrier accompanied by a cool pack. Accompanied with delivery documents in the form of Exit Proof of Goods (SBBK) and Vaccine Arrival Report (VAR). "Each cold box or vaccine carrier is accompanied by a clotting indicator".

From the interview excerpt, the Tabanan Health Service is responsible for providing logistics such as vaccines, cold chain facilities in the form of vaccine storage facilities including ADS, security boxes, cold rooms, freezers, vaccine refrigerators and freezers, as well as vaccine transportation. There are obviously refrigerated vehicles, especially coolers, vaccine carriers, ice packs, and equipment including temperature monitors, including thermometers, thermographs, coolant temperature monitors, continuous temperature monitors/recorders, and alarms. We are then responsible for distribution by delivering or collecting directly as requested by the authorities and taking over logistics storage to ensure no damage occurs.

Management Staff

Administrative Staff To carry out AEFI vaccination and surveillance services, every administrative level from the central level to the Community Health Centre level and every service unit must meet standards, namely undergoing professional authority requirements and competency training. According to the Tabanan District Health Director, the Tabanan District Health Director announced:

> "Apart from only having immunization programmers, there is 1 person who works to recap program activities, both for reports from community health centres and other activities."

Based on the results of the interview above, according to the informant, the health service seems to have prepared special administrative staff for both the Community Health Centre and the service itself, and special training has also been carried out for logistics management staff. There is only one person, called the programmer, who manages the vaccination program and is responsible for overseeing the planning, implementation and evaluation of the vaccination program, monitoring AEFI and recording reports. The Immunization Logistics Manager is responsible for storing, managing, distributing, maintaining, and reporting vaccines, syringes, cold chain equipment and other logistics necessary to provide immunizations. The number of Immunization Program Managers and Immunization Logistics Managers may include more than one depending on the number and needs of the existing workforce.

Under certain conditions, such as limited staff, the Vaccination Program Manager can also become the Vaccination Logistics Manager.

Training is one of our efforts to improve the knowledge, attitudes, and skills of Immunization Officers/Managers to improve their performance and quality. It is hoped that the training carried out will be accredited and awarded a certificate.

Implementation of Immunization

Immunization programs can be implemented individually or jointly with further reference to the Implementing Principles and Regulations. The following is the immunization practice at the Selemadeg, Pupuan 2 and East Selemadeg 2 Community Health Centres.

According to the Head of the Tabanan District Service, immunization practices are regulated in Government Regulation Number 12 of 2017 concerning Immunization Control, but technically the Director of Selemadeg Puskesmas Pupuan 2 and Selemadeg Timur 2 clarified:

> “We collect data separately for vaccination targets: babies, toddlers and pregnant women. Administration must be based on quality, use of syringes and immunization (dose, type and place of administration, dosing interval, alli-septic measures and contraindications)”.
>
> "Recording and reporting every month to the Tabanan District Health Service, all immunization activities are supported by the government. Implementation of immunization is funded by the government through help operational activities funds, so it is free. Those who have the authority to provide immunizations are Jurim, Village Midwives, Regional Development and Community Health Centre Doctors".

According to informants, immunization is carried out by collecting data on targets, examining vaccines related to the method of administering doses and so on, recording and reporting immunizations is carried out free of charge and those in charge are the immunization officer., Village Midwives, Regional Development and Community Health Centre Doctors. This statement was confirmed by the Coordinating Midwife and integrated service post.

> "Carrying out data collection on immunization targets, which are divided into babies, infants and pregnant women. Immunization is carried out at the Community Health Centre and Immunization Services outside at the integrated service post, or our school together with cadres will come every month to the integrated service post and school, for free, who are authorized to provide immunizations for Immunization officer., Village Midwives, Regional Development and Community Health Centre Doctors”.

The interview excerpt above shows that the implementation of immunization is carried out in accordance with Government regulations carried out inside and outside the building with the implementation process starting from collecting target data, conducting vaccine checks. Recording and reporting of immunization is carried out free of charge and those authorized to do so are the immunization officer, Village Midwife, Regional Development and Community Health Centre Doctors.

DISCUSSION

The results of the study showed that there was a significant influence between the supporting factors—the mother's knowledge and the attitude of the mother—and the basic immunization status in Public Health Center Tabanan district. According to Decree No. 12 of 2017, the legal responsibility of the Health Service is the management and reporting of garbage in the implementation of immunization at the Selemadeg Public Health Center, Pupuan 2, Selmadeg East 2, Tabanan Province. The role of the health service in the anti-vaccination movement has been inhibiting the implementation of immunization through cooperation with the IDAI and the support of the Public Health Centre to advocate immunization in accordance with religious beliefs and regulations. Public Health Center Selmadeg, Selmadega East 2, Pupuan 2, and Tabanan District The problem of the responsibility of the law of vaccination is the emergence of the anti-vaccination movement. Violation of the Immunization Act by socializing and establishing problems related to the implementation of legal responsibility in immunization implementation in Public Health Center Selemadeg, Selmadeg East 2, Pupuan 2, and Tabanan District Communications on

the implementation of the immunization program in Tabanan Province are well carried out, and there is clear communication from the parents of children aged 0–12 months in the province of Tabanan. But although households, schools, and Integrated service post have announced that health officials have come to the vaccination site, there are still many people and parents who do not come to do the basic vaccination completely. Also, the parents of the child may not communicate properly.

The Tabanan district public health centre had health care to handle a complete basic immunization program, but it is inadequate and insufficient. During the consultation and immunization process, Operational Expenses or Funds used Additional Funds from the Operational Assistance Fund Activities, in which funding for integrated post-service activities such as the provision of complete basic immunization vaccines is given free of charge by the government for the full basic immunization program activities. The holders of the complete basic immunization program have been with the public health centre and the village maid for 14 years, still serving and supporting the community, and they're all very dedicated. So when they reach the community where they're doing immunization programs and supported by other health workers, they jump directly into the community, sometimes with the direct participation of the head of the public health centre and the health service of the Tabanan District. In the public health centre of Tabanan district, a complete basic immunization program guideline mechanism is implemented by both the head of the public health centre and health officials in accordance with the operational standards of the procedure. (SOP). However, there are still many people who don't want their children vaccinated for a variety of reasons.

The results of the statistical analysis using the chi square test show that there is a meaningful relationship between the distance to the health care facilities and the provision of complete basic immunization (age 0–12 months) in the work area of the Tabanan District Public Health Centre, with a p value of 0.000, meaning a p value < 0.05. The statistical analyses using the Chi square showed that there was a significant relationship between confidence and giving full basic immunization (aged 0–12 months) in public health centre. District's work area with the support of the family with a full basic vaccination (age 0–12 months, meaning p< 0.05) in the working area of Public Health Centre District, with a value of 0.00, meaning p < 0.05. Determinants that influence mothers' behaviour towards complete primary immunization during the COVID-19 pandemic are known to be low. The most dominant factor influencing this is the attitude and support of the family. From the input side, the SDM variable indicates that the availability of SDM in both public health centre is sufficient. In other words, the public health centre vaccination scheduling variable is in line with the other maternal and child health programs, so the midwife can't focus on just one program.

The organizational variables in the Public Health Centre with the Self-Practice Branch to date are still not well coordinated in terms of recording and reporting. Further on the variable of implementation of immunization services that exists in public health centre, there are still some obstacles, namely at the stage of counselling that cannot be done due to the limitation of time held by the midwife in the provision of services and still the lack of support provided by the BPM in the recording and reporting, which can affect the coverage of immunization. All this time, surveillance is done only by looking at virgin compliance through inter-virgin questioning or by the quality team. Further on the environmental aspects of family support, public figures and their surroundings regarding the immunization program have been obtained in one of the public health canters, whereas those still not obtaining the support of a small part of the community due to misunderstanding of the information available regarding the negative impact of immunization have also been found in a public health canter.

Based on the results of research and discussion, it can be concluded that the number of human resources for immunization in public health centre Tabanan district is still low. The management of the chain of vaccines in the Tabanan District Public Health Centre has been implemented with maximum efficiency, and the Tabanan District Public Health Centre has

performed monitoring and evaluation every month in accordance with the Regulations of the Minister of Health No. 12 Year 2017. It is hoped that this research can be a plan for immunization energy needs in public health centre, Tabanan district, so it can be proposed for a formation plan to fill the vacuum of immunization energy in the Public Health Centre.

We conducted a mixed-methods study to identify factors that influence identify factors that influence Community Health Centre Basic Immunization Program Achievement during the COVID-19 Pandemic in Tabanan regency. The use of quantitative and qualitative components supplemented each other to strengthen the validity of the inferences.

Factors Affecting Basic Immunization Coverage during the COVID-19 Pandemic

a. Territorial Restrictions or Lockdown

In Ontario, Canada, this resulted in a significant decline in vaccination coverage early in the COVID-19 pandemic compared to pre-pandemic levels. This is because parents are worried about taking their children to medical facilities during the lockdown. Regional restrictions also limit the number of immunization service workers so they cannot reach children at home [21].

This is also supported by a study that found that strict social distancing was enforced when lockdown occurred in several areas, making it difficult for parents or caregivers to access immunization records that were not in the national electronic database. documents they have [22].

b. Parent

In Saudi Arabia, 24.4% of parents chose not to continue immunization during the COVID-19 pandemic [23]. Many parents refrain from visiting health facilities. This is because transmission of COVID-19 can damage the immunization service system [23]. In Sindh Province, Pakistan, parents hesitate to vaccinate their children for fear of coming to a health facility and contracting COVID-19 [21]. This is also in accordance with study that found that parents with children around 12-18 months of age did not need to be vaccinated during the pandemic because they believed they had received half of the required vaccinations [23]. This is in accordance with study that parents who have transportation are 21 times more punctual in communicating immunization schedules or continuing delayed immunizations [23],[24]. The study supports previous research that the lack of availability of public transportation can cause an increase in parents' travel costs, resulting in lower immunization coverage [21].

c. Health Workers

Health workers must adapt to the COVID-19 pandemic situation. Health workers are concerned about the possibility of transmitting COVID-19 through interactions with patients who are not wearing personal protective equipment (PPE). During the COVID-19 pandemic outbreak, there was a worldwide shortage of PPE such as masks, eye protection, and hand sanitizers.[21] Clearer and more accurate information about vaccines and vaccine risks. enabling complete basic immunization by asking questions. Health workers are required to be more sensitive and able to convince parents not to doubt and worry about the function of vaccines and to convince parents not to be afraid to bring their children to health facilities during the ongoing COVID-19 pandemic [25].

Government Efforts to Overcome the Problem of Completeness of Basic Immunization during the COVID-19 Pandemic. The government's effort to fulfil basic immunization requirements for children is by carrying out health promotions to increase awareness about the dangers of delaying immunization to avoid VPD [22].

Apart from that, in Saudi Arabia, increasing visits for immunization services is by providing a check-up appointment service via an application, so that parents can make appointments and reschedule immunization schedules. Apart from that, through study that identified children who had not received vaccinations and offered to provide missed vaccinations.[19] The Government of Sindh Pakistan has a strategy to carry out immunization services with clear SOP standards by using complete PPE and maintaining cleanliness during service. In

addition, we run a catch-up program to catch up with children who miss their immunization schedule [21].

This reinforces the importance of WHO guidelines which emphasize a routine basic immunization schedule to continue even during the COVID-19 pandemic [22]. There is a need to train health workers to provide safe immunization services and train communication in convincing parents to take their children for immunization at health facilities [25].

During the COVID-19 pandemic, an effective health promotion strategy is needed in implementing IDL to minimize the spread of COVID-19 through face-to-face contact in conveying information related to IDL implementation, but the challenge is related to maximizing the use of communication media in conveying information about the IDL implementation schedule.

Based on in-depth interviews, it was found that the health promotion strategy took the form of advocacy for community empowerment movements to mobilize information which must be carried out by Integrated service post, cadres in increasing public knowledge and awareness of the importance of IDL in the era of the COVID-19 pandemic, but the maximum health promotion strategy was carried out by the community health centre. A health promotion strategy is a way to realize the vision and mission of health promotion with a strategic approach so that it is achieved effectively and efficiently [26].

An economic crisis can arise at any time, it is important to communicate the crisis effectively to repair damage that could have a negative impact on the immunization program and public health [27]. Some of the work that must be done is training implementers and building good relationships with community leaders to teach the importance of health protocols during IDL services during the COVID-19 pandemic.

CONCLUSION

The implementation of the complete basic immunization program has been carried out well by the leadership of the Community Health Centre and health workers in accordance with standard operating procedures (SOP). However, there are still people who do not want to relax for various reasons. Supervision during immunization administration needs to be improved to minimize anti-vaccine actions, and also to educate the public regarding the importance of immunization. Planning for the implementation of basic immunization using a clustering system and monitoring and evaluation system with an information technology approach for basic immunization services can be applied to the COVID-19 pandemic situation.

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