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RESEARCH ARTICLE

POLICY IMPLEMENTATION OF PPKM, 5 M AND VACCINATION ON THE EFFECTIVENESS OF REDUCING COVID-19 CASES IN DKI JAKARTA

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Abstract

DKI Jakarta is one of the areas that has the highest number of Covid-19 cases in Indonesia. The central government and local governments are trying to make various efforts and policies to deal with Covid-19. Various policies and efforts have been made by the DKI Jakarta government to control the spread of Covid-19. The Government Policy timeline, including the Implementation of Community Activity Restrictions (PPKM), Policies for washing hands, wearing masks, maintaining distance, avoiding crowds and maintaining a distance (5M) and vaccination policies. The purpose of this study was to analyze the effect of effective policy implementation on the reduction of positive cases. This study uses a quantitative method with stratified random sampling. The results showed that the implementation of the PPKM, 5 M and vaccination policies had a positive and significant impact on the decline in cases in DKI Jakarta. The managerial implication in this case is that improving the quality of these factors is the basis that must be met by the Government, and it requires a response, quick and maximum action, also by developing collaboration and strengthening the structure of the bureaucracy.

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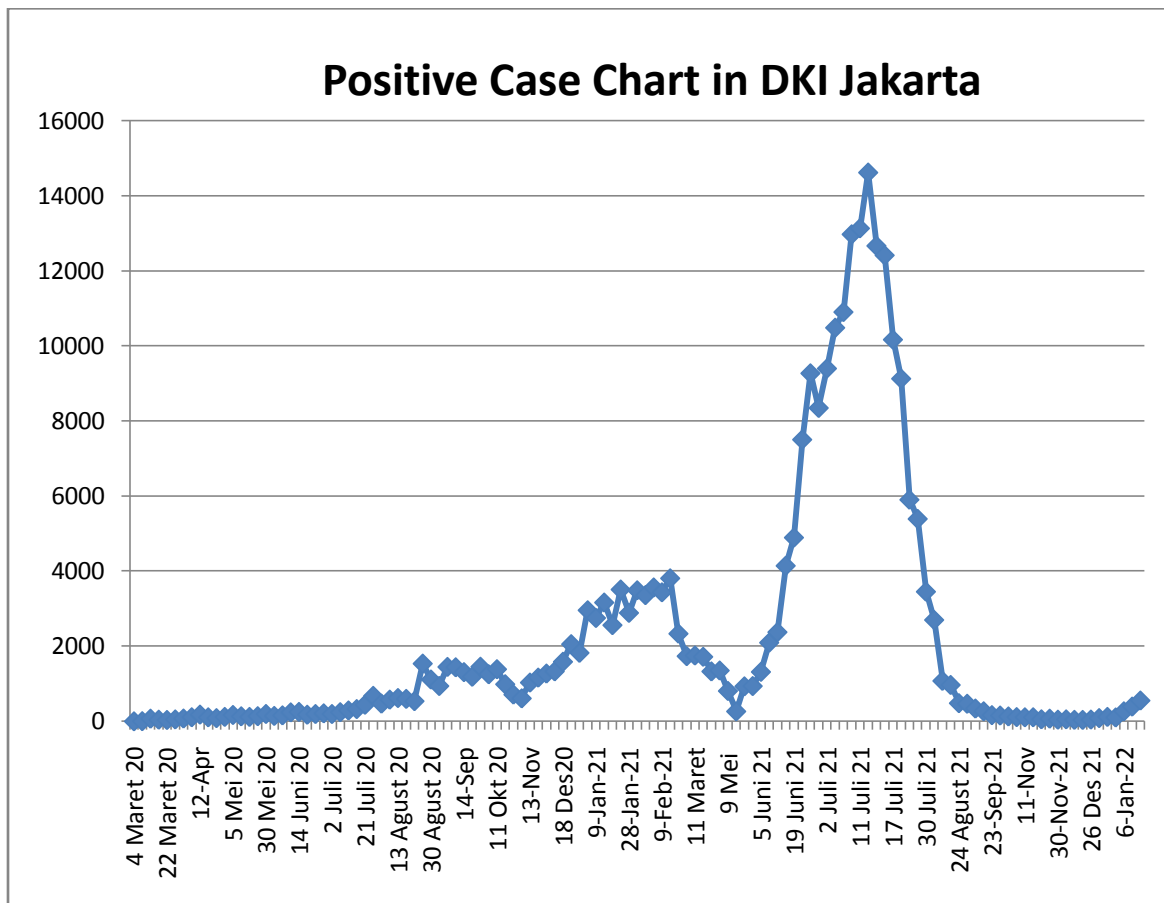
Introduction:-

Coronavirus is becoming a public health problem in the twenty-first century [1]. An academic from the Chinese Academy of Engineering, Dr JianguoXu who led the scientific team announced that a new type of coronavirus, tentatively named by the World Health Organization as 2019-new coronavirus (2019-nCoV), was the cause of this outbreak [2]. Entering 2020 based on the World Health Organization (WHO), the Coronavirus Disease 2019 (Covid-19) pandemic has spread to all corners of the world, namely more than 122 countries [3]. Over time, the SARS-CoV-2 virus that causes Covid-19 has also developed so that it can replicate. The large number of new variants of the SARS-CoV-2 virus has caused a spike in daily positive confirmed cases worldwide, one of which is Indonesia. The high number of Covid-19 cases that occurred in DKI Jakarta, made DKI Jakarta the province that contributed the most to positive cases of Covid-19 in Indonesia [4].

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The Minister of Health of the Republic of Indonesia on February 4, 2020 has issued Decree of the Minister of Health Number 104 of 2020 which stipulates Novel Coronavirus Infection (2019-nCoV infection) as a disease that can cause outbreaks. On March 11, 2020, Coronavirus 2 (SARS-CoV-2) was declared a pandemic by WHO [5]. The President of the Republic of Indonesia then declared the status of this disease to be in the Emergency Response stage on March 17, 2020. The corona virus pandemic was declared a national disaster through Presidential Decree No. 12 of 2020. As the State Capital, Jakarta bears enormous economic and socio-political functions. The policy for handling the Covid-19 pandemic in the DKI Jakarta Province has indirectly become a measure and barometer of the handling of Covid-19 in Indonesia. This effort becomes difficult because there are economic and social burdens that must be balanced [6]. So that the policies described in the positive confirmation numbers, deaths and recoveries, become indicators in the ups and downs of policies for handling Covid-19 in DKI Jakarta. According to WHO, one indicator that the epidemic is under control in a country is if the positive number is less than 5% [7]. In previous studies, it was found that the spike in positive cases occurred due to the lack of government response and slow handling, as well as the public's indifference to the government's appeal [8]. There is disharmony between central policies and local government policies [9]. Where the parameters of the conceptual model in handling Covid-19 are measured from public reactions and government actions [10]. The community will respond to policies that are logically acceptable [11]. The number of Covid-19 patients who recover every day tends to start increasing in the August 2021 period, indicating that the pattern of handling Covid-19 patients has been found and its implementation has been successful so that the recovery rate has increased significantly. Likewise, the death rate in DKI Jakarta can be suppressed so that it tends to be stable, at 2.2%. [12].



Data source : Corona.jakarta.go.id, 2021.

Figure 1:- Positive Case Rate in DKI Jakarta.

The transmission of Covid-19 can be influenced by population density, poverty, and population mobility [13]. Given the magnitude of the social turmoil that exists in DKI Jakarta as the capital city, DKI Jakarta must remain vigilant. Precautions for transmission of Covid-19 are prioritized for potential risk groups [14]. Jakarta as the Special Capital

Region of the country with a dense population, with an average density of 16,923.89 and a high level of mobility as well as a gateway for world traffic to various regions. The government is increasingly focusing its efforts on horizontal policy making, relating to laws, programs and practices that regulate substantive aspects of society. Policies are complex and interconnected with the mandates of two or more departments, jurisdictions or non-governmental organizations, where collaborative arrangements are driven in part by pressures to improve performance and achieve measurable improvements in service delivery [15]. Several policies taken by the Government as one of the efforts to deal with the Covid-19 pandemic include the PPKM Policy, Implementation of 5M and Vaccination. DKI Jakarta Province in facing the global pandemic has become the focus and attention of many levels of society. Departing from this background, the purpose of this study is to find out how the implementation of the policy in the community and how effective it is in reducing Covid-19 cases in DKI Jakarta.

Method:-

The research method used in this study is a comparative causal quantitative method. In this study, the population is DKI Jakarta residents based on the productive age group, namely 15-64 years and the elderly age group, which is above 60 years, with a total of 7,654,206 people. The sampling technique used was stratified random sampling, namely the sampling technique was carried out by taking representatives from each geographical area, level of education, occupation, age, gender. Each group was sampled proportionally to the total existing sample (Atmosukarto, 1994). So that a sample of 171 people was obtained, with the criteria of being domiciled or working in 6 districts/cities of Jakarta. The instrument used in this study was a questionnaire distributed through an online application form to respondents. For processing data from the results of the questionnaire, researchers used the Likert scale method with multiple linear regression statistical calculation models.

Table 1:- Variable Measurement.

No	Variable X	Implementation Theory by Marilee S. Grindle
1.	PPKM Policy	1. Interests of the target group
		2. Benefit Type
		3. Desired degree of change
2.	5 M Policy	4. Place decision making
		5. Program implementation
		6. Resources involved
3.	Vaccination Policy	7. Powers, interests, strategies of the actors who Involved
		8. Characteristics of institutions and rulers
		9. Compliance and catch
	Variable Y	Effectiveness Theory according to CambelJ.P
	Decrease in Covid-19 Positive Cases	1. Program success
		2. Target success
		3. Satisfaction with the program
		4. Input and output levels
		5. Overall goal achievement

Results:-

In this study, there is one dependent variable, namely a decrease in the number of positive cases of Covid-19 and three independent variables, namely PPKM, 5 M and Vaccination. Based on the results of the research that has been carried out, it can be concluded that 61% of respondents are residents of DKI Jakarta who live in Jakarta, while 31% of respondents have a non-Jakarta ID card but work in Jakarta, and students are 8% with an average percentage of 96% having received the vaccine.

Test Instrument

Validity Test and Reliability Test

To obtain valid, reliable and objective data, valid and reliable instruments must be used. From the results of the validity test at a significance level of 5%, the statement items must meet the results of the validity test where the value of r count is greater than r table, where r count is above 0.148. Meanwhile, for the reliability test on the statement items on the PPKM, 5M, and Vaccination variables, they must meet the measurement requirements with

Cronbach's Alpha above 0.60. The measurement results obtained that the value of Cronbach's Alpha PPKM was 0.654, while for 5M it was 0.769 and for Vaccination it was 0.823. From the results of the instrument test, it can be said that the statement items have met the requirements.

Classic Assumption Test

Normality test

From the results of the normality test, it can be seen that the significance value (Monte Carlo.Sig 2-tailed) is 0.324. This value is greater than the normality significance requirement ($0.324 > 0.05$), so it can be said that the residual value is normally distributed or there is no normality problem.

Heteroscedasticity Test

Based on the results of the heteroscedasticity test, it can be seen that the F-Statistic (F-count) is $104.12 > 0.05$, so it can be concluded that the data in this study had no symptoms and there was no heteroscedasticity in the regression model used.

Multicollinearity Test

The results of the multicollinearity test showed that it had fulfilled the requirements where the VIF value < 10 for all independent variables, namely PPKM was 1.411, 5M variable was 2.299 and Vaccination variable was 2.318. Meanwhile, the tolerance value for all independent variables in PPKM is 0.709, 5M is 0.435 and vaccination is 0.413 which is above 0.1. This shows that the regression model has met the assumption of multicollinearity.

Coefficient of Determination Test (R²)

Based on the measurement results of the coefficient of determination (R²), it can be seen that the meaning of the R square value of 0.652 means that the Effectiveness of Reducing Covid-19 Cases in DKI Jakarta is influenced by the contribution of the PPKM Policy Implementation, 5 M and Vaccination by 65.2% and the remaining 34, 8% is influenced by other factors outside the Policy.

Regression Model Test

T Test (Partial)

The terms of the t-test are if the significant value is 0.000 less than 0.05 and the t-count value is greater than the t-table, which is 1.974. From the measurement results obtained the following results.

1. The PPKM policy has a positive and significant impact on the decline in Covid-19 cases, indicated by a p value of $0.000 < 0.05$.
2. The 5M policy has a positive and significant impact on the decline in Covid-19 cases, indicated by a p value of $0.000 < 0.05$.
3. Vaccination policy has a positive and significant impact on the decline in Covid-19 cases, indicated by a p value of $0.000 < 0.05$.

From the regression model obtained the equation:

$$Y = 3.488 + 0.450 X_1 + 0.721 X_2 + 0.546 X_3$$

This means that the decrease in Covid-19 cases is influenced by a constant value of 3,488 plus policy variables that have a positive influence, where for each increase of 1 unit variable will affect a decrease in the number of Covid-19 cases by 0.450 for the PPKM policy, and is influenced by the 5M policy of 0.721 and by vaccine policy is 0.546.

F Test (Simultaneous)

In multiple linear regression analysis, the simultaneous effect test is used to test the effect of all independent variables together on the dependent variable. Based on the measurement of the F test, it is known that the significance value of 0.000 is less than 0.05 and the calculated F value of 104.12 is greater than the F table, which is 2.66. Due to the significant value of the simultaneous test result < 0.05 , H_0 is rejected. This shows that H_4 is accepted, meaning that the implementation of the PPKM Policy, the 5M Policy and the Vaccination Policy simultaneously (together) have a significant effect on the Effectiveness of Reducing Covid-19 Cases.

Table 2:- Hypothesis Testing Results.

Hypothesis	Hypothesis Statement	T-Value	Description
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H1	The implementation of the PPKM policy has an effective effect on reducing Covid-19 cases in DKI Jakarta	4,594	Hypothesis accepted
H2	The implementation of the 5M policy has an effective effect on reducing Covid-19 cases in DKI Jakarta.	5,258	Hypothesis accepted
H3	The implementation of the vaccination policy has an effective effect on reducing Covid-19 cases in DKI Jakarta.	4,713	Hypothesis accepted
H4	The implementation of the PPKM, 5 M and vaccination policies together has an effective effect on reducing Covid-19 cases in DKI Jakarta.	104,124	Hypothesis accepted

Data Source: SPSS data processing results

Discussion:-

The Effect of PPKM Policy Implementation on the Effectiveness of Reducing Covid-19 Cases in DKI Jakarta.

This policy to limit the movement of people has changed its name and format several times, starting from PSBB, Transitional PSBB, Micro PPKM, Emergency PPKM, to level four PPKM. PPKM is then adjusted according to the assessment level of each Regency/City. The policy of implementing PPKM is something that cannot be avoided in order to reduce the rate of transmission of Covid-19. When there was a spike in cases in the second wave, the Government tried to overcome the surge in Covid-19 cases, including by implementing the Emergency Community Activity Restriction (PPKM) and controlling the capacity of hospitals that handle Covid-19 patients so that they are not over capacity. Health economist HasbullahThabrany assessed that the decline in positive cases of Covid-19 was the impact of the Implementation of Emergency Community Activity Restrictions (PPKM) which was carried out on July 3, 2021 [16]. Some of the regulations regarding Emergency PPKM include restrictions on teaching and learning activities, non-essential and essential sectors, eating and drinking activities in public places, places of worship, transportation, and other activities that cause crowds [17]. It is undeniable that the PPKM policy has an impact on the economy of the community.

From the results of a survey of respondents, it was found that 62% felt that they were affected by the policy. Apart from this impact, the Government must implement this policy to reduce the number of Covid-19. As the findings in this study, which showed that the PPKM policy had a positive and significant impact on the decline in Covid-19 cases, it was indicated by a p value of $0.000 < 0.05$. And from the results of a survey of respondents obtained for support for this policy is 91%, with the perception that the implementation of PPKM has been effective at 83%, at the level of satisfaction with the policy of 77.2%. In this regard, the Government needs to increase its effectiveness by seeking policies that take sides and make it easier for the community, by slightly reducing the negative impacts that can arise from the existence of these policies.

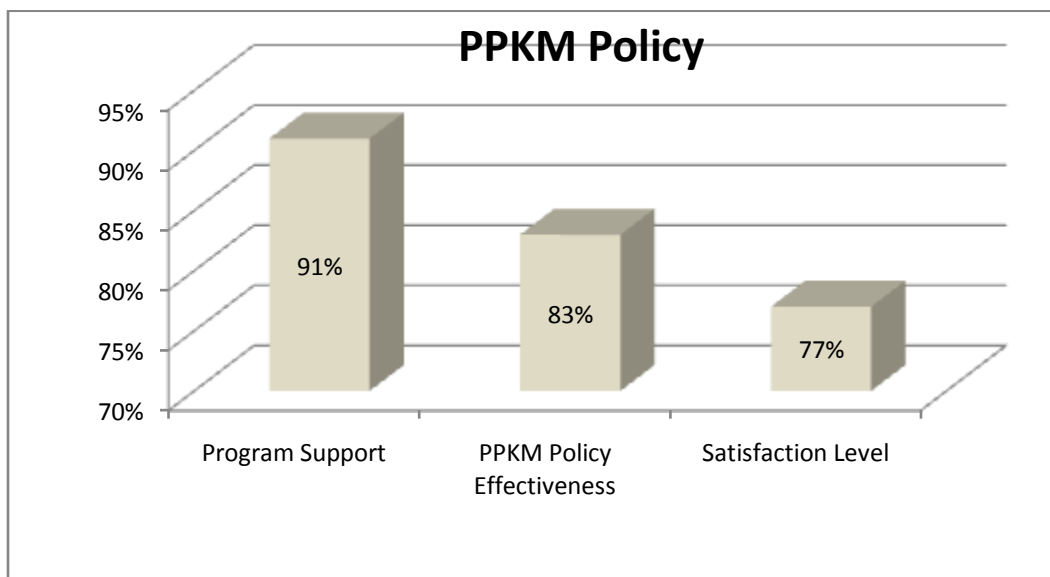


Figure 2:- The results of a survey of respondents.

The Effect of 5M Policy Implementation on the Effectiveness of Reducing Covid-19 Cases in DKI Jakarta

In facing the adaptation of new habits towards a productive and safe society against Corona Virus Disease 2019 (Covid-19), it is necessary to organize various activities with public health priorities. This refers to the Decree of the Minister of Health of the Republic of Indonesia Number Hk.01.07/Menkes/382/2020 concerning Health Protocols for the Community in Public Places and Facilities in the Context of Prevention and Control of Corona Virus Disease 2019 (Covid-19). The government has made guidelines and health protocols to deal with Covid-19 and consistently maintains immune health. The Health Protocol issued by the Indonesian Ministry of Health is the 5M health protocol. The 5M health protocol is quite simple but important to do during the New Normal period. The 5M includes the application of wearing masks, maintaining distance, washing hands, avoiding crowds and reducing mobility. The 5 M policy is one of the strategies in the promotive and preventive efforts carried out by the Government [18]. The behavior of 5M in the community is very helpful in reducing the spread of Covid-19 cases in addition to maximizing the 3T movement carried out by the Government. In line with this, it is proven by the results in this study that the 5M Policy has a positive and significant impact on the decline in Covid-19 cases, indicated by a p value of $0.000 < 0.05$. From the results of a survey of respondents, the support for the 5M policy is 98.8%, and the perception of the effectiveness of the policy is 83%, with a satisfaction level of 90.1%. In this case, the Government can increase effectiveness by continuing to carry out regular socialization both through the media and interactively in the community, as well as providing examples of behavior through existing figures in the community by developing more innovative policies.

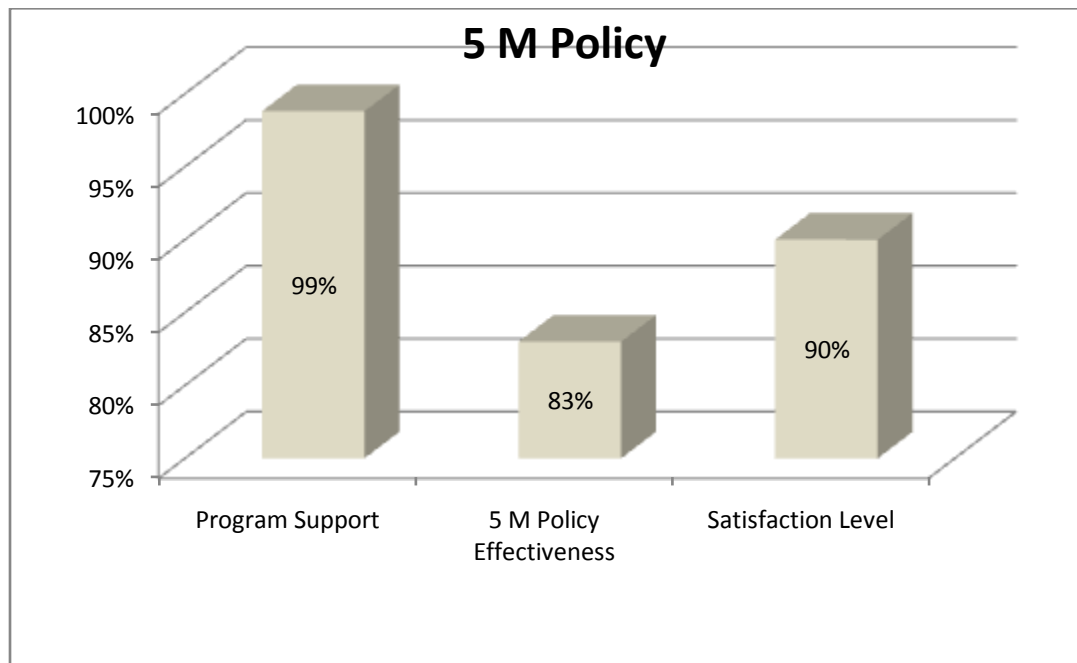


Figure 3:- The results of a survey of respondents.

The Effect of Vaccination Program Implementation on the Effectiveness of Reducing Covid-19 Cases in DKI Jakarta.

The implementation of vaccination starts from January 13, 2021 until March 2022 which is divided into 4 stages and in 2 periods [19]. Period I (January-April 2021): Phase 1, with a target of 1.4 million health workers, 17.4 million public officers, and 21.5 million elderly. Phase 2, has a target of 38 million public service officers and 21 million elderly. Period II (April 2021-March 2022): Phase 3, with a target of 63.9 million people with high risk, other general public, and children aged 12-17 years. Stage 4, has a target of 77.4 million for the general public and children aged 6-11 years. To suppress the increasing number of cases, the scope of the Covid-19 vaccination is now being expanded. This refers to the Decree of the Minister of Health Decree of the Minister of Health of the Republic of Indonesia Number HK.01.07/MENKES/6688/202 concerning the Implementation of the Corona Virus Disease 2019 (Covid-19) Vaccine for children aged 6 (six) to 11 (eleven) years which was published in December 2021

(Ministry of Health, 2021). The Provincial Government of DKI Jakarta continues to innovate for equal distribution of vaccinations in the capital, including Mobile Vaccination Cars and Mini Vaccination Centers, as well as collaborating with various parties. The administration of the vaccine generally aims to reduce the transmission or transmission of Covid-19, reduce morbidity and mortality due to Covid-19, and achieve group immunity in the community (herd immunity). Giving this vaccine is the most appropriate solution to reduce the number of cases of infection with the SARS-CoV-2 virus that causes Covid-19 disease. Based on the results of the study, it was shown that the vaccination policy had a positive and significant impact on the decline in Covid-19 cases, indicated by a p value of $0.001 < 0.05$. From the results of a survey of respondents, the support for this policy is 99%, with the perception that implementation has been effective at 94.1%, with a satisfaction level of 93.5% with the policy. Even though the community support is quite large for this policy program, from the survey results, there are 1.75% of respondents who have not been vaccinated because they still feel doubtful and unsure. Through socialization efforts that the importance of vaccination still has to be done so that all parties, especially the community, get the right understanding and can play an active role in the success of the program.

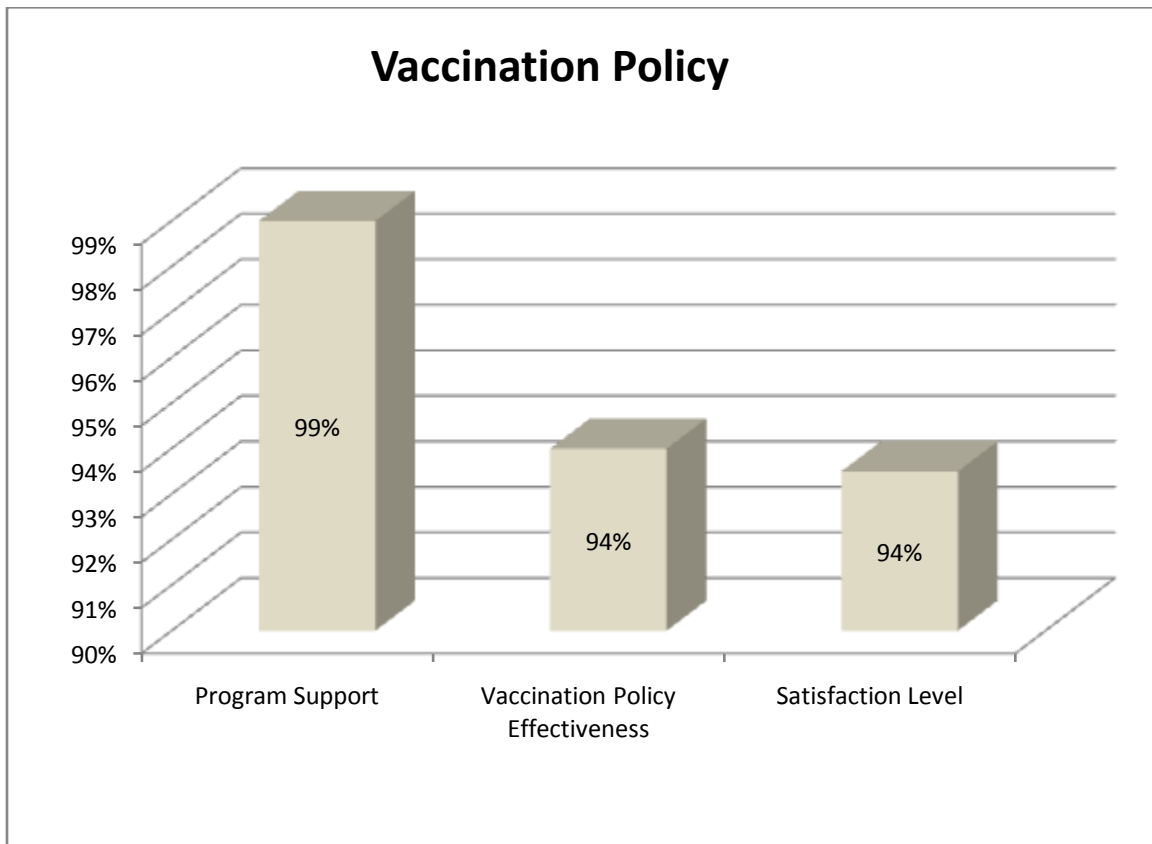


Figure 4:- The results of a survey of respondents.

The Effect of the Implementation of PPKM, 5 M and Vaccination Policies on the Effectiveness of Reducing Covid-19 Cases in DKI Jakarta.

The coronavirus disease 2019 (Covid-19) has caused a global health crisis that has had a major impact on the way people perceive the world and everyday life [21]. The Corona virus or Covid-19 pandemic has almost paralyzed all community activities [22]. The implementation of PPKM and the Covid-19 5M Movement must still be carried out, even though the corona virus vaccine has begun to be given. The PPKM, 5 M and Vaccination policies if synergized and implemented together will certainly be much more effective and have a positive impact on the number of Covid-19 cases decreasing. The results in this study indicate that the PPKM, 5M and Vaccination policies have a simultaneous effect on the decrease in Covid-19 cases, indicated by a p value of $0.000 < 0.05$. In line with these results, it shows that DKI Jakarta has consistently experienced a decrease in cases starting in the third week of Emergency PPKM. DKI Jakarta's achievement in the success of Emergency PPKM certainly cannot be separated

from the synergy between community compliance in implementing health protocols and the achievements of the vaccination program.

Conclusions And Recommendations:-

Based on the results and previous discussions, the conclusions in this study are as follows:

- a. The PPKM policy has a positive and significant impact on reducing the number of Covid-19 cases.
- b. The 5M policy has a positive and significant impact on reducing the number of Covid-19 cases.
- c. Vaccination policy has a positive and significant impact on reducing the number of Covid-19 cases.
- d. The PPKM, 5M and vaccination policies have a simultaneous effect on the decrease in the number of Covid-19 cases.

Research Limitations

- a. The small number of research samples and the number of respondents who can participate to be able to fill out online questionnaires.
- b. In the data collection process, the information provided by respondents through questionnaires sometimes does not show the respondent's actual opinion, this happens because of different understandings, as well as other factors such as honesty in filling out respondents' opinions in the questionnaire.
- c. A closed statement using a Likert scale measured from "strongly agree-strongly disagree" is still not able to find out more deeply what are the factors and reasons that influence the respondent's behavior.

Suggestions for further research related to this research are as follows:

- a. In order to get a good research model supported by a strong theory, it is recommended to increase research references that are able to support the topic under study.
- b. Conducting ongoing research, this is in order to be able to see and assess any changes in the respondent's behavior from time to time.
- c. It is hoped that there will be additional variables, samples that may also affect many things in this study.

Managerial Implications

DKI Jakarta, which had previously been the epicenter of the spread of Covid-19, has succeeded in controlling the Covid-19 pandemic in the second wave period so that it has received appreciation from Deep Knowledge Analytics (DKA) based in London in handling Covid-19. The Indonesian Ministry of Health has also given an award to the DKI Jakarta Provincial Government for its success in carrying out isolation tracing tests, implementing the Covid-19 health protocol, and in implementing the Covid-19 vaccination.

Entering 2022, the DKI Jakarta Provincial Government still has to work hard and remain vigilant against the threat of the spread of the SARS-CoV 2 Variant of Concern (VoC) virus, which is named the Omicron variant (B.1.1.529). The majority of Omicron cases have been detected and cases are increasing in DKI Jakarta, so that policy adjustments are needed taking into account the epidemiological situation and response capacity. The DKI Jakarta Provincial Government in controlling the Covid-19 pandemic is to respond quickly and responsively to the community's response, by prioritizing five pillars, namely collaboration, scientific, data driven policy, transparency, and system readiness, accompanied by strengthening the bureaucratic structure. Continuing the strict PPKM policy, maximum health protocols, followed by increasing 3T capabilities and also accelerating the implementation of the child and booster vaccination program with support from the government and the community.

The Regional Government and the Central Government should be able to observe that the PPKM, 5 M and Vaccination Policies are able to create an effective reduction in the number of Covid-19 cases in DKI Jakarta, so that improving the quality of these factors becomes the basis that must be met by the Government. It is hoped that the experience of the previous two years will be a very valuable lesson to overcome and suppress so that the number of positive cases does not increase again in DKI Jakarta.

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