

The village fund utilization and its implication for public health improvement in the pandemic era

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ABSTRACT

Introduction: The allocation of village funds to the health sector focused on reducing nutritional problems and involving the village in controlling non-natural disasters caused by COVID-19. The study aimed to analyze the implication of the village fund toward public health performance in the pandemic era.

Methods: Ecological analysis was conducted using secondary data from the East Java Health Profile 2020. The sample was 29 districts of East Java, where all the villages receive village funds. Apart from village fund utilization as the dependent variable, the independent variable consists of nutritional status, active *Posyandu*, case of COVID-19 and recovery rate of COVID-19. Data were analyzed by univariate and bivariate. The bivariate analysis was performed using the chi-squared test.

Results: Undernourished and wasting were silent health burdens in the pandemic. The pandemic also made the active *Posyandu* is lower. High attention to Kediri dan Jombang was grouped to vulnerable health areas. Statistically, no correlation between the village fund utilization with public health improvement in the pandemic era.

Conclusion: Although there is no statistical correlation, nutrition issues and the impact of using village funds on health must be a concern. An in-depth evaluation needs to be carried out on the use of village funds to get clear implications for public health.

Keywords: Village Fund, Nutritional Problem, Pandemic, Covid-19.

Cite This Article: Handayani, D., Firdaus, N.J. 2022. The village fund utilization and its implication for public health improvement in the pandemic era. *Bali Medical Journal* 11(2): 702-705. DOI: 10.15562/bmj.v11i2.3140

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Received: 2022-01-20

Accepted: 2022-07-19

Published: 2022-08-03

INTRODUCTION

The potential of *Coronavirus* as a pathogen and public health problem was realized when the SARS outbreak occurred in Southern China in 2003. The virus was re-discovered as the cause of MERS in Jordan in June 2012, with a mortality rate of 36% higher than SARS.¹ The whole world is currently facing a health emergency due to COVID-19. COVID-19 is caused by SARS-CoV-2 which belongs to the *Coronavirus* family. WHO designated COVID-19 as a Public Health Emergency of International Concern (PHEIC) on January 30, 2020, due to the significant increase in confirmed new cases in various countries.² While the global pandemic status was set on March 11, 2020.

Globally, the total of confirmed cases of COVID-19 at the end of December 2020 reached 80,783,035 cases, with 1,784,109 deaths (CFR 2.2%). Meanwhile, Indonesia has the highest confirmed cases of COVID-19 among ASEAN countries, with the total confirmed cases of COVID-19 reaching 735,124 cases with a

CFR of 3%.³ Nationally, East Java Province is in the second position with the highest confirmed cases after Jakarta. However, the COVID-19 death rate in East Java is the highest compared to other provinces, at 6.9%.⁴

Various efforts to control COVID-19 have been carried out by several ministries, including the Ministry of Villages, the development of disadvantaged regions, and transmigration as a form of attention from the Indonesian government. Efforts are being made to allocate village funds for handling COVID-19.⁵ The allocation is regulated in Government Regulation in Lieu of Law Number 1 of 2020 and states that village funds can be used for direct cash assistance to the poor and activities to handle the COVID-19 pandemic. The Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration No. 6 of 2020 also stipulates the allocation of village funds according to the government regulation with an additional allocation of funds for village cash labor-intensive. In addition to allocations for disasters, village funds

continue to allocate priority health programs per national health development goals, such as the prevention of nutritional problems.⁶ Thus, this study aimed to analyze the implication of the village fund toward public health performance in the pandemic era.

METHODS

Study Design

The study was designed using an ecological analysis approach. Ecological studies focus on comparisons between groups, not individuals.

Data Collection

The study was conducted using secondary data from the East Java Health Profile report, 2020. As many as 29 of 38 districts or cities in east java were involved in this analysis. Batu City was excluded from the samples. The dependent variable was village funds utilization. While the independent variable consists of nutritional status, active *Posyandu*, case of COVID-19, and recovery rate of COVID-19.

Data Analysis

The data analyzed was aggregate data at a certain group or level, which in this study was the province level. The variables in an ecological analysis can be aggregate measurements, environmental measurements, or global measurements.^{7,8}

RESULTS

The utilization of village funds for is measured by quantity based on the proportion of villages that use village health funds in each district. Ideally, all villages should be utilized the village fund for health. The districts with a village percentage of less than 100 percent in utilizing village funds for health in 2019 consist of Sidoarjo (95.65%), Lumajang (51.01), Jember (47.13%), and Trenggalek (41.53%). The district that utilized the village fund ideally was decreasing in 2020. Despite the districts that previously had not reached 100 percent in utilizing village funds for health funds were increased.

Village funds are expected to strengthen the autonomy at the village level. One of which is in improving the health status of the community. Descriptively, villages in the East Java district almost entirely utilize village funds for health. The priority village fund for health in 2020 was added to control COVID-19, although it did not eliminate the obligation to achieve priority health programs such as alleviating nutritional problems. *Posyandu* has an important role in efforts to reduce nutritional problems, but it seems that its implementation has not been optimal (mean less than 80%). Nutritional status as the output of the service process showed undernourished as a warning signal due to the mean is being close to the upper limit of the standard. While wasting is high (standard less than 5%). The low standard deviation indicates that the sample districts experience this condition almost evenly.⁹

According to [table 2](#), 22 of 23 districts that declared their village had been used the village fund for health showed health performance at a low level. Regarding COVID-19, the high number of cases was followed by the low recovery rate of patients in 83.33% of districts that stated all their villages had used village funds for health. Meanwhile, 38.8% of the district had high cases of COVID-19 followed by

poor active *posyandu* and 50% with poor nutritional status. Kediri and Jombang can be classified as districts with a high level of vulnerable health. Attention to further health interventions is required.

Based on [table 3](#) showed there is no difference in health performance in the districts with high and low percentages of village funds utilization for health. Overall variables are not correlated significantly.

DISCUSSION

The village fund is expected to have a major impact on controlling COVID-19 because it starts at the village level, which is considered a vulnerable group. However, the results showed no correlation between the use of village funds for health and health improvement during the pandemic. Although the village fund was allocated a budget of Rp 72 trillion in the pandemic era in 2020, 20-30 percent of total funds should be allocated to cash transfers using the village fund (BLT-D).¹⁰ Nationally, the highest allocation of village health funds for COVID-19 prevention was socializing a healthy lifestyle (22.66 percent of the villages) and spraying disinfectants (21.27 percent of the villages). Meanwhile, the recruitment of village volunteers to prevent the pandemic is low (14.2 percent of villages). This problem is followed by low data collection of people prone to illness (12.16 percent of the village) and returnees and travelers (10.95 percent of the village).¹¹ The condition is sufficient to illustrate that the use of village funds for health only looked at implementation but did not measure the expected output

and impact on reducing COVID-19 cases. Thus, the use of village funds must encourage villages to participate in the prevention of COVID-19 by prioritizing vary both preventive and physical and infrastructure activities.

The resolution of nutrition problems is included as the priority program for the village fund. Descriptively, this data showed that the wasting is almost evenly distributed in the district of East Java during pandemic 2020. In addition, as a warning signal related to undernourishment. Nutritional problems that arise during the pandemic can be a significant concern for economic wellbeing. COVID-19 causes economic vulnerability due to job layoffs, the closing of factories, unproductive farms due to farmers being reluctant to go outside, and the temporary halting of rice imports from COVID-19-affected countries. The policy of Large-Scale Social Restrictions (*Pembatasan Sosial Berskala Besar*) also including restricted the movement of people or goods to a certain province or district and city to prevent the spread of COVID-19.² Interrupting the food system will impact food insecurity issue which is very threatening to vulnerable groups, especially to people already in food shortage, or children relying on food supplementation programs, or the low-income informal workers.¹²

Through the village fund, cash assistance to the community in the form of Cash Transfers from the Village Fund (BLT-D) and The Cash-for-Work (*Padat Karya Tunai Desa: PKTD*) Program to

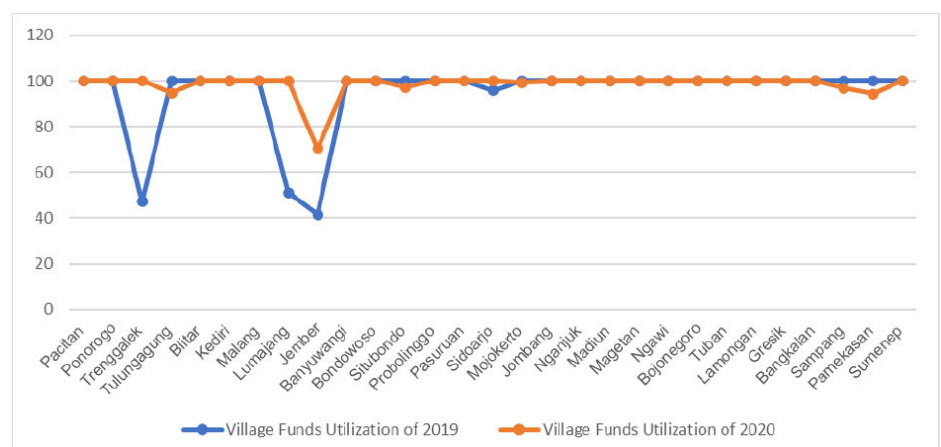


Figure 1. Percentage of the village which utilize village funds for health in East Java in 2019 and 2020.⁴

assure economic wellbeing. Income shocks and disruptions to food supply become the main contributing factors to food insecurity. Meanwhile, the Indonesian government provides various financial assistance programs to vulnerable groups, one of which is also through village funds. The assistance is divided into cash and non-cash. This assistance covered 71% of households in the bottom 60% of the expenditure distribution and reported that they needed cash assistance from the government. However, A higher proportion of non-cash beneficiary

households reported being concerned about food insecurity. The data showed that 12.3% of non-cash beneficiary households were eating less than usual.¹³

The results also show high cases of COVID-19 followed by low *Posyandu* services. *Posyandu* is one of the community-based health services in Indonesia. *Posyandu* prioritized activities related to child health. Both urban and rural *Posyandu* performed weighting, supplementary meals provision, and vitamin A supplementation. It encouraged the improvement of child health status,

particularly for early detection of a malnourished child, hence reducing the burden of malnutrition.¹⁴ During the pandemic, the *Posyandu* activities were hampered. One of the impacts is the low coverage of under-five weighing. This condition is very worrying because nutritional problems cannot be monitored quickly. The spike in COVID-19 cases, the limited number of health workers due to exposure to COVID-19, and concerns about contracting COVID-19 contribute to suboptimal *Posyandu* services during the pandemic.¹⁵

Table 1. Descriptive statistics variables of health performance related to utilization of village fund, 2020.

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Percentage of the village that utilize village funds	29	70.40	100.00	98.36	5.60
Nutritional status					
a. Undernourished	29	4.19%	16.60%	9.85%	3.35
b. Stunting	29	5.40%	20.90%	12.57%	4.40
c. Wasting	29	3.00%	13.80%	7.81%	2.84
Active <i>Posyandu</i>	29	33.50%	94.40%	75.50%	14.67
Confirmed of COVID-19	29	519.00	7980.00	1943.03	1545.95
Recovery Rate of COVID	29	64.80%	92.62%	81.63 %	14.67

Source: *The East Java Profile, 2020*

Table 2. Mapping of Health Problem in The East Java District with High Utilization Village of The Village Fund, 2020.

No	The District	Health Problem			
		Poor Nutritional Status	Poor Active <i>Posyadu</i>	High Case of COVID-19	Low Recovery Rate of COVID-19
1	Banyuwangi		√	√	√
2	Blitar	√		√	√
3	Bojonegoro		√	√	
4	Bondowoso			√	√
5	Gresik		√	√	√
6	Jombang	√	√	√	√
7	Kediri	√	√	√	√
8	Lamongan	√		√	√
9	Lumajang	√		√	√
10	Madiun	√	√		
11	Magetan		√		√
12	Malang			√	√
13	Nganjuk	√		√	√
14	Ngawi	√	√		
15	Pacitan		√		
16	Pasuruan	√		√	√
17	Ponorogo			√	√
18	Probolinggo	√		√	√
19	Sidoarjo		√	√	√
20	Sumenep			√	
21	Trenggalek			√	√
22	Tuban	√	√	√	

Source: *The East Java Profile, 2020*

Table 3. The Effect of health performance related to the utilization of village fund 2020.⁴

Variable	Percentage of Village Funds Utilization		Total (n=29)	Sig.
	High	Low		
Nutrition status				
Good	12	3	15 (51.72%)	0.924
Poor	11	3	14 (48.27%)	
Active Posyandu				
Good	12	3	15 (51.72%)	0.924
Poor	11	3	14 (48.27%)	
Confirmed of COVID-19				
High	18	4	22 (75.86%)	0.554
Low	5	2	7 (24.14)	
Recovery Rate of COVID-19				
High	7	2	9 (31.03%)	0.891
Low	16	4	20 (68.96%)	

CONCLUSION

Utilization of village funds for health is not correlated with improving public health performance, both COVID-19 and improvement of nutritional status of the community. However, it should be noted that districts with good utilization of village funds were facing health problems related to COVID-19, nutritional problems, or both. There is a possibility that the COVID-19 condition will worsen the health performance as a priority program of village funds. Addressing this problem needs to be understood, especially by the village government and policyholders, to start organizing every activity sourced from the village health fund. It is not only about implementation but also needs to assure the output and impact on health will be measured.

DISCLOSURE

Author Contribution

All authors have contributed to this research process, including conception and design, analysis and interpretation of the data, drafting of the article, critical revision of the article for important intellectual content, final approval of the article, collection and assembly of data.

Funding

The authors are responsible for all of the study funding without a grant or any external funding source.

Conflict of Interest

There is no conflict of interest for this manuscript.

Ethical Consideration

This research was approved by the Health Research *Ethics* Committee of the Department of Public Health, Nahdlatul Ulama University Surabaya. Letter of exemption Ref. No. 11.765/NU.22/LL/2020

ACKNOWLEDGEMENT

We sincerely thank to The Provincial Health Office of East Java that this script can be carried out well. This script would hopefully positively contribute to educational development, public health, or those willing to conduct further research.

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