

## **Structural Intervention In Increasing The Achievement Of Covid-19 Vaccination In Elderly Group In Bandara Kulon Village, Bagor District Nganjuk**

**Susi Jumiani<sup>1\*</sup>, Ardi Bastian<sup>2</sup>**

<sup>1,2</sup>*Institut Ilmu Kesehatan STRADA Indonesia*

\*Corresponding Author: [susi.santana82@gmail.com](mailto:susi.santana82@gmail.com)

### **ABSTRACT**

The Covid-19 virus attacks many vulnerable groups, one of which is the elderly group. The achievement of Covid-19 vaccination in the elderly group is still low. Of the 333 elderly people who have been successfully vaccinated, only 125 have been vaccinated. The purpose of this study was to determine the effect of structural interventions given to the elderly group on increasing Covid-19 vaccination achievements. The method used is a quantitative method with Pre-experimental designs one-group pretest-posttest design. The data used is data from the Bagor Health Center as of December 30, 2021. The sampling technique uses Simple Random Sampling. The total sample of this study was 137 respondents. Based on the results of the mc nemar test, a significance value was obtained, namely, the value of  $2_{obs} = 125.008$  and p-value of 0.000 with  $\alpha = 0.05$ . So there is a difference in willingness to be vaccinated between before the intervention and after the intervention. Structural interventions carried out in the elderly group who have not received the covid-19 vaccination can increase the achievement of the covid-19 vaccination in the elderly group so that it can accelerate the formation of herd immunity in the community.

**Keywords:** Covid19 Virus, Covid-19 Vaccination, Herd Immunity, Structural Intervention.

### **INTRODUCTION**

Corona virus disease 2019 which is then called Covid-19 is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2). Based on data from the World Health Organization (WHO) Covid-19, which has been endemic since 2019, has infected more than 230 countries in the world with a total number of cases cumulatively as of February 5, 2021, as many as 116,874,912 (Kemenkes RI, 2021).

Vaccination or immunization is a procedure for administering a disease antigen, in the form of a weakened or dead virus or bacteria, it can also be just part of the virus or bacteria. COVID-19 vaccination aims to reduce the transmission/transmission of COVID-19, reduce morbidity and mortality due to COVID-19, achieve herd immunity and protect the community from COVID-19 to remain socially and economically productive. Herd immunity can only be established if vaccination coverage is high and evenly distributed throughout the region. Prevention efforts through the provision of vaccination programs if assessed from the economic side, will be much more cost-effective, when compared with treatment efforts.

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In Nganjuk Regency, covid-19 vaccination began to be carried out in February 2021, and health workers were the initial targets of vaccination recipients. In the vaccination reporting system, it is divided into 3 categories, namely:

- Teenagers (age 12 years s/d 17 years)
- General public (ages 18-58)
- Elderly (age > 59 years).

According to the results report as of December 30, 2021 at the Bagor Health Center, the achievements of Covid-19 vaccination are as follows:

- Adolescent category 93.19 % IE 4500 people have been vaccinated from the real target of 4829 people.
- General public category 88.41 % IE 30,279 people have been vaccinated from the real target of 34,248 people.
- Elderly category 58.74% IE 4,708 people have been vaccinated from the real target of 8,015 people. (In the reporting, the benchmark percentage of achievement is vaccine dose 1).

From these data, the elderly category occupies the lowest percentage of the other categories, namely 3,307 people have not been vaccinated (41.26%). And of the 22 villages in Bagor district, Banarankulon Village occupies the lowest position for Covid-19 vaccination achievements in the elderly category. Of the total number of unvaccinated elderly in bagor district (3,307 people) in Banaran Kulon village, there are 208 unvaccinated elderly (62.46%) from 333 real targets in Banaran Kulon Village.

## METHODS

**The subjects** in this study were a group of elderly people in Banaran Kulon village, Bagor District, Nganjuk Regency who had not received the covid-19 vaccination.

**The method** used is a quantitative method with the design of Pre-experimental study designs type one-group pretest-posttest design. The Data used is data from the Bagor Health Center as of December 30, 2021. Sampling technique using Simple Random Sampling.

## RESULTS

### Analysis Of Characteristic Variables

#### 1. Age Characteristics Of Respondents

Below are the characteristics of respondents, namely the age of respondents in Banarankulon village, Bagor District:

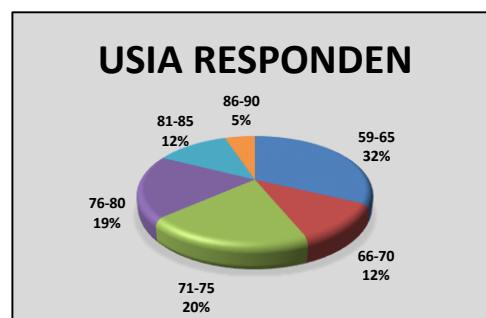


Figure 4.1 characteristics of respondents based on the age of respondents in Banarankulon village, Bagor District, Nganjuk Regency which was held from 1 to 15 February 2022 with a total of 137 respondents.

Based on figure 4.1, it is known that most respondents aged 59-65 years as many as 44 respondents (32%).

## 2. Sex Characteristics

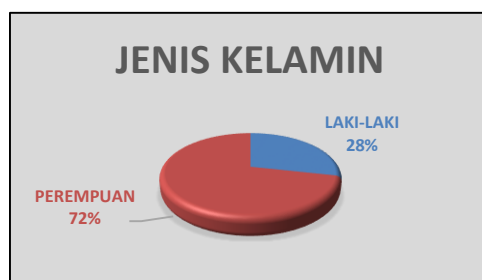


Figure 4.2 characteristics of respondents based on gender of respondents in Banaran kulon village, Bagor District, Nganjuk Regency which was held from 1 to 15 February 2022 with a total of 137 respondents.

Based on figure 4.2, it is known that most of the respondents were female, namely 98 respondents (72%).

## 3. Characteristics based on intervention

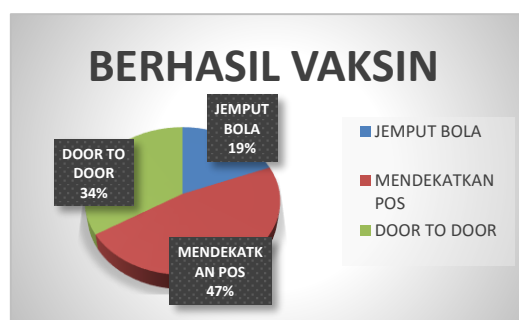


Figure 4.2 characteristics of respondents based on interventions given to respondents in Banarankulon village, Bagor District, Nganjuk Regency which was carried out from 1 to 15 February 2022 with a total of 137 respondents.

Based on figure 4.2, it is known that most of the respondents who were successfully vaccinated were in the intervention near the Vaccination Service post from 113 respondents who intervened vaccinated 60 people (47%).

Based on the data on the covid-19 vaccination achievements of the Bagor Health Center for the elderly group as of December 30, 2021 in Banarankulon village, 37.54 % (125 people) who have been vaccinated were obtained. The achievement rate can be said to be still low because it is still far from the target that has been determined, namely 70% of the elderly have been vaccinated. The implementation of vaccines has been carried out by the health sector but the interest of the elderly to participate in vaccinations is still low.

Based on the identification carried out, the researchers conducted structural interventions involving 3 pillars, namely from the Health Team, TNI/POLRI, and the village. The interventions carried out include: carrying out vaccination services with Ball pick-up interventions, carrying out vaccination services with interventions that bring service posts closer to 4 service location points, and carrying out vaccine services with door to door interventions. Of the 3 interventions that have been carried out, they can provide good results that can improve the achievement of covid-19 vaccination in the elderly group, namely 75.68% (252 people).

Prior to the intervention, 137 respondents had not been vaccinated. After the intervention, there were 127 who were willing to be vaccinated or in the sense that the vaccination achievement was from 0 people to 127 people.

From the results, the researchers tested the results of the study using MC Nemar Test. The MC Nemar test was carried out on 137 respondents and 127 respondents were found to have changed from not wanting a vaccine to wanting a vaccine, and 10 respondents had not managed to get the covid-19 vaccination. As shown in the following table :

**Test Mc NEMAR****Before and after the intervention**

While based on the results of statistical tests showed that the value of Sig (2-tailed) = 0.000 < significant level = 0.005, then the decision is to reject H0. This means that there are differences before and after the intervention is carried out. As shown in the following table:

| <b>Test Statistics</b> |                            |
|------------------------|----------------------------|
| <b>Komponen</b>        | <b>Sebelum Dan Sesudah</b> |
| N                      | 137                        |
| Exact Sig.(2 tailed)   | .000 <sup>b</sup>          |

- a. Mc Nemar Test  
b. Binominal distribution used

| <b>Before</b>        |                | <b>After</b>         |                |
|----------------------|----------------|----------------------|----------------|
| Don't want a vaccine | want a vaccine | Don't want a vaccine | want a vaccine |
|                      | <b>0</b>       | <b>10</b>            | <b>127</b>     |

By seeing the low achievement of covid-19 vaccination in Banarankulon village, the researchers conducted a study in the form of providing interventions. Such interventions include :

**A. Intervensi Jemput Bola**

Based on the results of research that researchers have done to 137 respondents and obtained results there were 24 respondents willing to be vaccinated (19%). Of the 24 respondents were divided into several age groups, namely age 59 – 60 years there were 3 respondents (12.5%), age 61 – 65 years there were 5 respondents (20.83%), age 66 – 70 years there were 2 respondents ( 25%), age 71 – 75 years there were 6 respondents (37.5%). Age 76 – 80 years there were 5 respondents (20.83%), age 81 – 85 years there were 3 respondents (12.5%). And the respondents consisted of 8 male respondents (33.33%), and 16 female respondents (66.67%).

**B. Intervensi Mendekatkan Pos Pelayanan Vaksinasi**

This study was conducted to 113 respondents, respondents in the intervention near the service post were respondents who were not successfully vaccinated in the pick-up intervention. Of the 113 respondents who received interventions closer to the service post, there were 60 respondents (47%) who were willing and qualified to get the Covid-19 vaccination. Of the 60 respondents were divided into several age groups, namely age 59 – 60 years there were 2 respondents (3.3%), age 61 – 65 years there were 14 respondents (23.33%), age 66 – 70 years there were 6 respondents ( 10%), age 71 – 75 years there were 12 respondents (20%). Age 76 – 80 years there were 15 respondents (25%), age 81 – 85 years there were 9 respondents (15%) and age 86 – 90 years there were 2 respondents (3.33%). And the respondents consisted of 9 male respondents (15%), and 51 female respondents (85%).

Intervention to close the service post is to open the post at the point where many targets have not received the vaccine. In Banarankulon village, it is scheduled to open a service post at Mr. RW's House and at the hamlet head's House, namely there are 4 service posts, scheduled on February 8, 9, 10, 11, 2022. Before the implementation of the cadres and RTS distributed invitations for the implementation of vaccines to vaccine targets who had not received vaccinations and to targets whose time was dose 2 and dose 3. Of the 880 invitations distributed, there were 113 targets recorded as respondents. After 4 days of vaccination at 4 points of the research service Post, 60 respondents were successfully vaccinated.

For the community, some access recipients, close vaccination service facilities make it easier for them to access so that there are not many affairs left because their time is wasted when anti to get vaccination services. According to the intervention researchers, this service post is an effective strategy after the target Ball pick-up strategy that has been done before, in the hope that the target feels more comfortable because the vaccine is carried out in their immediate environment. And after the evaluation

of the elderly are happy with this close post so they are not tired of queuing for a long time. Approaching this service Post, each post can cover around RT so that the service can be maximized.

### C. Intervensi Door to Door

From the results of research that researchers have done that intervention door to door conducted against 53 responden. Respondents in this door to door intervention are respondents who have not been successfully vaccinated from Ball pick-up intervention and intervention near the service post. Of the 53 respondents who received door-to-door interventions, there were 43 respondents (81.1%) who passed the Covid-19 vaccination and there were 10 respondents (18.9%) who did not manage to get the vaccine because they did not pass the health screening, namely 8 respondents and those who really refused, namely 2 respondents. Of the 53 respondents were divided into several age groups, namely age 59 – 60 years there were 5 respondents (9.43%), age 61 – 65 years there were 15 respondents (28.3%), age 66 – 70 years there were 8 respondents (15.09%), age 71 – 75 years there were 9 respondents (16.98%), age 76 – 80 years there were 6 respondents (11.32%), age 81 – 85 years there were 6 respondents (11.32%) 86 – 90 years there were 4 respondents (7.55%). And the respondents consisted of 21 male respondents (39.62%), and 32 female respondents (60.38%).

Door to door intervention is krgistsn where officers go to the target from house to house in priority is the target of the elderly and those who experience impaired mobilization. This intervention was carried out on February 15, 2022 starting at 08.00 from Banaran Hamlet and continuing to Padangan Hamlet and finishing at 13.30. These door to door officers consisted of Health Workers, assistant Health Workers, Village officials, RT/RW heads, Health cadres, Babbinkantibmas, and Babhinsa. Officers conduct screening at the patient's home and if they pass the screening and sign the approval on the screening sheet, the vaccination will be given directly on site. If anyone refuses to eat the target or the family signs a refusal statement that has been prepared by the officer. Of the 95 targets visited at home, there were 53 respondents with the results of 43 respondents successfully vaccinated, 8 respondents did not pass the health screening because of hypertension 5 respondents, history of epileptic seizures 2 respondents and a history of having asthma 2 respondents. And there were 2 respondents who refused the covid-19 vaccination because it was forbidden by their children and because they were afraid.

The results showed that this door-to-door strategy is indeed very effective in increasing vaccine interest from targets who were previously reluctant to vaccinate for various reasons. The community believes that coming home to get services is very helpful for targets, especially for those who have difficulty mobilizing but still hope to get vaccination services. This strategy is very effective when applied in a program that requires all goals to be covered in the program.

Researchers were able to prove that the 3 structural interventions carried out were able to change the achievement of covid-19 vaccination in the elderly group, from the number before the intervention of 37.54% to 75.68% after the intervention. The achievement figures have met the targets that must be achieved. So that the conditions for the formation of herd immunity can be achieved.

## CONCLUSION

Based on the results and discussion that has been done, it can be concluded:

1. The identification carried out was that there were 137 elderly people in Banarankulon village who were not willing to be vaccinated against Covid-19 for various reasons or in other words the vaccination achievement in respondents was still 0. And from 137 respondents before structural intervention
2. After structural intervention, a remarkable change was made to the achievement of covid-19 vaccination in the elderly group in Banarankulon village. Of the interventions carried out are:
  - Pick-up intervention received 24 respondents (17.52%) passed the covid-19 vaccine from 137 respondents
  - Intervention to bring the vaccine service Post closer to 4 Service Post points, 60 respondents (43.80%) passed the covid-19 vaccine from 137 respondents.
  - Door-to-door intervention vaccination services received 53 respondents (31.39%) passed the covid-19 vaccine from 137 respondents.

3. After the study, there were differences in the achievement of the covid-19 vaccine in the elderly group before and after structural interventions. Namely from 137 elderly people who initially did not want to get the vaccine, 127 elderly people have been successfully vaccinated against covid-19. Thus, the structural interventions that have been carried out by researchers have been able to change the achievement of covid-19 vaccination in the elderly group in Banarankulon village, from the vaccine achievement rate before the intervention of 37.54% to 75.68% after the intervention.

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