Original Research

Behavioral Changes In Elderly Hypertension In Covid-19 Prevention

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ABSTRACT

Background: COVID-19 is a disease that can infect everyone, especially vulnerable groups such as the elderly with hypertension. Various educational institutions have carried out COVID-19 transmission, but they are still one-way and not very effective in suppressing COVID-19 spread. Therefore, in this study, health education will be conducted using the Focus Group Discussion (FGD) method so that this study aims to determine the effect of health education with the focus group discussion method on the behavior of the elderly with hypertension in preventing COVID-19.

Methods: This study used a quasi-experimental design with 56 respondents for two groups (intervention group = 28 and control group = 28). Multistage cluster sampling was taking samples. The research instrument was a previously tested knowledge, attitude, and skills questionnaire for validity and reliability. The study was conducted at the Muara Enim Health Center. The data collected was processed using SPSS version 25.0 and analyzed by univariate (frequency and percentage) and bivariate (paired t-test and independent t-test).

Results: The results of this study indicate an effect of health education using the FGD method on the behavior of the elderly with hypertension in preventing COVID-19 (p = 0.01).

Conclusion: Health education with the FGD method can improve the behavior of the elderly with hypertension. For further research, it is necessary to involve the family as a support system in implementing health education with the FGD method using the Zoom application to increase the aggregate knowledge of the elderly in the community.

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INTRODUCTION

On March 11, 2020, the World Health Organization declared a global pandemic related to the spread of the COVID-19 virus around the world (Cucinotta & Vanelli, 2020). Data from the United States reports that the most significant COVID-19 deaths occurred among adults aged 65, with the most severe outcomes among people aged 85 (Abdel Wahed et al., 2020). This finding is similar to data from China, which showed that>80% of deaths occurred in people aged 60 years (Hua et al., 2020).

Indonesia reported that the high mortality rate in Coronavirus Disease (COVID-19) in 2020 is associated with their comorbid conditions, and the highest mortality rate occurred in the age group 60 (51.47%) with comorbidity was hypertension (42.31%) Djaharuddin et al., (2021) practices in controlling COVID-19. Many older people are forced to stay at home due to COVID-19, and they face problems of lack of social support and deterioration of their physical and mental health (Lim et al., 2020). The research results in Bangladesh showed an increase in knowledge, attitudes, and skills; 48.3% of participants had accurate knowledge, 62.3% had a more positive attitude, and 55.1% more occurred among young adults and students.

During the lockdown period, they received information about controlling COVID-19 from online school education. This condition contrasts with the older group, which suggests a lack of understanding of COVID-19 control. As a result, this study suggests that an online health education program be developed to improve knowledge, attitudes, and skills during the lockdown period (Ferdous et al., 2020).

The research results on the elderly during lockdown show that mobile learning is in great demand by the elderly and can also increase their learning efficiency and motivation. This is evidenced by research conducted on 75 elderly registered in calligraphy classes at senior learning centres in China using the AR calligraphy approach and the E-book approach at home during the pandemic, which showed that learning AR calligraphy and with the help of smartphones, e-books, can improve the health and quality of life of the elderly. However, this intervention is still one-way in nature, so other interventions are needed to adopt two-way interactions to enhance the quality of life and mental health of the elderly during emergency closure due to COVID-19 (Lee & Hsu,2021).

Focus group discussions are often used in qualitative research to gain an in-depth understanding of social problems and obtain data from a deliberately selected group of individuals. One method that allows for two-way interaction both with the facilitator and with other members is Focus Group Discussion (FGD). However, there is no critical assessment of the application of the technique. So, with characteristics that allow for two-way interaction and communication between members, this FGD technique is suitable to be applied as an approach to health education for the elderly (O. Nyumba et al., 2018).

This result is reinforced by an assessment from an Iranian nursing home service provider who shows relatively high demands on a service system oriented towards decision-making, expressing opinions and interactions among the elderly, and maintaining personal habits. Based on the characteristics of the elderly who expect independence in expressing opinions and interactions between facilitators and peers, the application of the FGD method that allows for two-way interaction and communication is used in the health education approach to the elderly, thus becoming the basis for conducting online FGD interventions in this study. Moreover, this online FGD technique is the safest technique to be carried out in the Muara Enim area with a red zone compared to face-to-face FGDs at risk of causing Covid-19 transmission.

Therefore, in this study, FGDs will be carried out as a health education strategy to see if there are changes in the behavior of older people with hypertension who have hypertension-related COVID-19. So this study aims to determine the effect of health education with the focus group discussion method on the behavior of older people with hypertension to prevent COVID-19.

MATERIALS AND METHOD

This research was conducted at the Muara Enim Health Center in April-May 2021. The study used a quasi-experimental design with a pre-test and post-test with a control group. The intervention group was a group of hypertensive elderly who were given health education interventions using the focus group discussion method, while the control group was assigned leaflets. Samples were taken by multistage cluster sampling.

A purposive sampling technique calculated the number of pieces; as many as 56 people were divided into two groups, 28 in the intervention group and 28 in the control group, with the following criteria: age more than 60 years, without comorbidities, good general condition, willing to be a respondent, able to read and write, and have a smartphone and understand how to operate the zoom application. Randomization was carried out through simple random sampling, namely the names of the elderly who were entered into a closed box and then taken one by one to be used as respondents for the intervention group and the control group.

The intervention carried out in the intervention group was an online FGD. This intervention was carried out for four meetings there on different topics. The first meeting explored and identified the problems experienced by the elderly during the COVID-19 pandemic, the second meeting discussed COVID's transmission methods, and the third meeting discussed how to prevent the transmission of COVID-19. The fourth meeting recalled the information and results of the discussions held at meetings one to three.

Each session lasted for 90 minutes, guided by the facilitator. The meeting began by asking the facilitator questions about the agreed-upon topic, and then a discussion took place between the participants, driven by the facilitator. At the end of the meeting, the facilitator briefly summarized the critical points from the FGD results and asked the participants again if they had any opinions that they would like to convey or add. The control group received general intervention through Covid-19 transmission prevention materials provided through the WhatsApp Group.

The instrument has been tested for validity and reliability using product moment and Alpha Cronbach's alpha. The tools used were questionnaire sheets (knowledge, attitudes, and skills), SOPs for health education using the FGD method, and a Google form questionnaire. The results of the validity test showed that the calculated r value was more significant than the r table ($r = 0.374$), and the reliability value showed a knowledge test result of 0.911; attitude was 0.954; and skills were 0.899, so the instrument is declared valid and reliable Data analysis used univariate, bivariate (paired T-test and independent T-test), and multivariate regression.

Data collection was carried out from baseline (on May 5, 2021) to follow-up (on July 5, 2021). Data screening was carried out to ensure that the questionnaire was filled out entirely so it could be entered on the computer. In addition, the data was coded for analysis using SPSS version 25.0. As a result, all questionnaires were filled out completely, and no participant dropped out of this study.

This research has passed the ethics test from the ethics committee of the Faculty of Nursing, Muhammadiyah University, Jakarta, and has received a certificate of passing the ethics test with letter number 0338/F.9-UMJ/IV/2021. In carrying out this research, it has fulfilled ethical principles such as explaining the research objectives, maintaining the confidentiality of respondents, and providing sufficient time for data collection. In addition, this study provides direct benefits, namely increasing knowledge, attitudes, and skills of hypertension elderly in preventing COVID-19.

This study also applies the principle of justice by giving equal treatment to respondents, both in the control group and the intervention group, regardless of gender, ethnicity, or religion, before, during, and after the study ends.

RESULTS

Characteristics of participants

Table 1 shows that most variables are female, highly educated, and not working in the two groups, and the average age is between 62 and 63 years.

Table 1. Differences in respondent characteristics between the intervention group and the control group (n = 56)

Variable	Intervention group (n = 28)	Control group (n = 28)
Age		
Mean (SD)	62,25 (3,75)	63,11 (1,91)
Median – Range (min-max)	62 – 22 (48 – 70)	63 – 7 (60-67)
Gender		
Male (F %)	11 (39,3 %)	5 (17,9 %)
Female (F %)	17 (60,7 %)	23 (82,1 %)
Education		
Low (F %)	3 (10,7 %)	8 (28,6 %)
High (F %)	25 (89,3 %)	20 (71,4 %)
Occupation		
Working (F %)	5 (17,9 %)	5 (17,9 %)
No working (F %)	23 (82,1 %)	23 (82,1 %)

Bivariate analysis

Health education interventions with FGDs on the prevention of COVID-19 significantly increased the behavior of hypertensive elderly in the intervention group. Furthermore, the effect of health education through FGDs was more significant in the intervention than in the control group. A more detailed description of the statement can be seen in tables 2 and 3.

Table 2. Analysis of differences in the behavior of hypertension elderly in preventing COVID-19 before and after intervention in the intervention group and the control group (n = 56)

Var	Intervention group					Control group				
	Mean	SD	95% CI		P	Mean	SD	95 % CI		P
			Lower	Upper				Lower	Upper	
Before	119,5	14,34	-12,6	-4,37	0,000	120,85	10,26	-3,23	0,23	0,087
After	128,03	0,91				122,35	10,18			
Behaviour before and after intervention (P= 0,011)										

In the intervention group, the value of p = 0.000 0.05 was significant. In the control group, p-value = 0.087 > 0.05, the result is not significant. Meanwhile, the value of the behavior of the elderly in the intervention group was greater than that of the control group, with a p-value = 0.011 0.05, meaning that there was a difference in the effect of

providing health education with the focus group discussion method on the behavior of the elderly with hypertension in the intervention group compared to the control group.

Multivariate analysis
The results of the analysis show that the value of Bo = 139.752, B1 = 3.113, B2 =-9.678, B3 =-0.075, and B4 =-0.838. Of the four confounding variables, only the sex variable p (0.000) 0.05 shows that only gender influences the behavior of hypertension elderly in preventing COVID-19.

Table 3. shows the effect of confounding variables on the behavior of hypertensive elderly people preventing COVID-19 when health education is provided using the FGD method.

| Var Confound | P | Homosked | | | | | |
		Square	F	P	B	P	Beta
Constant	0,540				139,752	0,000	
Age	0,057				3,113	0,422	0,096
Gender	0,390	0,264	5,942	0,001	-9,678	0,000	0,543
Education	0,571				-0,075	0,973	0,004
Profession	0,203				-0,838	0,779	0,037

DISCUSSION

The results showed an effect of providing health education with the online FGD method on the behavior of hypertensive elderly people in preventing COVID-19. This follows the FGD method applied among health workers from the slum community of Kolkata, India, who have successfully provided health education solutions about NCDs and their prevention efforts (Garg et al., 2018). The same method was used to identify increased knowledge about reproductive health in rural Uganda.

It was found that there was an increase in knowledge about reproductive health in the intervention schools with an AOR of 2.18, 95% CI: 1.66-2.86 (Kemigisha et al., 2019). The same thing was reported by Ye et al., (2020), that the elderly were less likely to engage in COVID-19 prevention behavior informed through one-way social media in China, and Rahimulyani et al., (2021) reported that without providing information with appropriate methods, some of the elderly respondents had less knowledge about COVID-19. According to the researcher's analysis, the FGD technique carried out in this study has provided real information needs of the elderly through extracting information first, followed by communication and interaction about appropriate COVID-19 prevention behavior as needed.

The results showed an increase in Covid-19 prevention behaviour in elderly respondents aged 62-63 with higher education after being given an online FGD intervention. Which was used as the basis for providing intervention through participation in weekly writing classes delivered virtually via Zoom for six weeks. The results showed a significant increase in their resilience p=0.014, decreased depressive symptoms p=0.008, perceived stress p=0.005, and increased post-recovery-traumatic p=0.004 (Bechard et al., 2021).

In addition, high educational status also affects the outcome of the intervention. This condition follows Ellya Susilowati (2020), who reported that high education affected the selection of actions to protect oneself from Covid-19 by understanding the

stages of preventing Covid-19 both for the elderly themselves and their families. Based on the researcher's analysis of the similarities from the study, the significant results can not be separated from the condition of the elderly who experience psychological changes.

The intervention provided in this study was sufficient to accommodate the requirements, problems and expectations of the elderly, who still need the opportunity to express their opinions, feelings, hopes and desires. This is by the FGD concept in this study, which explores problems first as a basis for providing appropriate interventions. The results showed that the female sex variable had the most influence on the behavior of the elderly with hypertension in preventing COVID-19 after being given an intervention.

This is supported by the findings in Saudi Arabia that women are the dominant factor in the beneficiaries of the course to solve various problems that arise due to COVID-19 using the Artificial Intelligence method (Aljizawi et al., 2021). However, this is different from the results of a mix-method study using surveys and FGDs to increase the mental resilience of nursing students in Perth, Australia. There was no significant difference in the mean confidence scores between males and females, either at pre-test (t =.18, df = 52, p = 0.857) or post-test (t = 0.26, df = 52, p = 0.799) (Hack-Polay et al., 2022).

The researcher assumes that the difference in findings with the results of other researchers is because, at a young age, the speed of adapting information technology between men and women is the same. Along with increasing age, women find it easier to adapt to new knowledge because women are easier to socialize with. This is consistent with the findings of the Japanese elderly, who showed that social curiosity and interaction with other people were significantly related to functional status (Watanabe et al., 2020).

Furthermore, active status is closely associated with life expectancy, where the life expectancy of women in Indonesia is higher than that of men. This demonstrates that during the COVID-19 pandemic, women pay more attention to health conditions and care. In addition, the role of women as mothers in the family must be an example in implementing clean and healthy living behaviors to prevent the transmission of COVID-19, including the habit of washing hands, maintaining distance, and using masks (Susilowati & Hakiem, 2020).

CONCLUSION

Health education regarding the prevention of COVID-19 with the focus group discussion method has proven to be effective in improving the behavior of the elderly with hypertension in preventing COVID-19. However, the limitation of this study is the lack of respondents who can use the Zoom application device, so they must be accompanied by their respective families. Therefore, for further research, it is necessary to research families with the FGD method on the same material as the elderly so that there is a common perception when families take care of the elderly at home.

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