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Behavior in the Prevention of COVID-19 in the Elderly after Tele–Nursing

Perilaku Pencegahan COVID-19 pada Lansia Setelah Tele–Keperawatan

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ABSTRACT

Prevention and management of COVID-19 in the elderly in Indonesia are essential. This is strongly influenced by the knowledge, attitudes, and behavior of the elderly about COVID-19. The elderly are the population most at risk due to COVID-19 transmission. This population requires health education on the prevention and impact of COVID-19 transmission. One of the interventions that can be done is through tele-nursing. This study aimed to identify the knowledge, attitudes, and behavior of the elderly to prevent and manage COVID-19 after tele-nursing. This research uses quantitative descriptive on 101 elderly respondents in 26 sub-districts in West Java. The instrument consists of symptoms, knowledge, attitudes, and behavior of COVID-19 in respondents who were measured after tele-nursing intervention in the elderly. The analysis uses percentage and frequency distribution. The results of the representative knowledge of respondents are good; only 31.7% of respondents do not know about the 2019 COVID-19 transmission through wild animals and 24.8% when there is no fever. The representation of the respondent's behavior after tele-nursing was nine respondents did not use masks, 33 still went to crowded places, 33 did not wash their hands after handling objects, and 34 did not avoid touching the face area. The knowledge, attitudes, and behavior of respondents illustrate the government's stay-at-home campaign and tele-nursing related to the prevention of COVID-19 in the elderly. Some respondents still have not carried out maximum prevention due to situations and conditions such as the economy, signals, and ownership of smartphones. Tele-nursing is one way to improve COVID-19 prevention behavior in the elderly. Further research can be carried out on the elderly by using Randomized Control Trials and qualitative studies to explore factors that influence the involvement of the elderly in the program.

ABSTRAK

Pencegahan dan penanganan COVID-19 pada lansia di Indonesia sangat penting. Hal ini sangat dipengaruhi oleh pengetahuan, sikap dan perilaku lansia tentang COVID-19. Lansia merupakan populasi yang paling berisiko akibat penularan COVID-19. Populasi ini membutuhkan pendidikan kesehatan tentang pencegahan dan dampak penularan COVID-19. Salah satu intervensi yang dapat dilakukan adalah melalui telenursing. Penelitian ini bertujuan untuk mengetahui pengetahuan, sikap dan perilaku lansia dalam pencegahan dan penanganan COVID 19 pasca telenursing. Penelitian ini menggunakan deskriptif kuantitatif pada 101 lansia yang menjadi responden di 26 kecamatan di Jawa Barat. Instrumen terdiri dari skrining gejala, pengetahuan, sikap dan perilaku COVID 19 pada responden yang diukur setelah intervensi telenursing pada lansia. Analisis menggunakan persentase dan distribusi frekuensi. Hasil pengetahuan representatif responden baik, hanya 32% responden yang tidak mengetahui penularan COVID-19 2019 melalui hewan liar dan 25% saat tidak demam. Representasi perilaku responden setelah telenursing adalah 9 responden tidak menggunakan masker, 33 masih pergi ke tempat keramaian, 33 tidak mencuci tangan setelah memegang benda, dan 34 tidak menghindari menyentuh area wajah. Pengetahuan, sikap dan perilaku responden merupakan gambaran dari kampanye pemerintah untuk stay at home dan telenursing terkait pencegahan COVID 19 pada lansia. Beberapa responden masih belum melakukan pencegahan maksimal karena situasi dan kondisi seperti ekonomi, sinyal, dan kepemilikan smartphone. Telenursing merupakan salah satu cara untuk meningkatkan perilaku pencegahan COVID-19 pada lansia. Penelitian lebih lanjut dapat dilakukan pada lansia dengan menggunakan *Randomize Trial* dan studi kualitatif untuk menggali faktor-faktor yang mempengaruhi keterlibatan lansia dalam program.

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BACKGROUND

Coronavirus diseases 19 is an infectious disease that attacks the human respiratory organs caused by Coronavirus. This disease has spread to various countries. Situation report August 12th, WHO reported as many as 216 countries affected by this disease with a total of 20,162,474 confirmed positive and 737,417 people died[1]. The latest report from as of August 12th reports that 128,776 positive confirmed COVID-19 data and 5,824 have died, with a CFR of 4.52[2].

Common signs and symptoms of COVID-19 infection include symptoms of acute respiratory distress such as fever, cough, and shortness of breath. The clinical signs and symptoms reported in most cases were fever, with some having difficulty breathing. Compared to other respiratory diseases, COVID-19 spreads faster with a long incubation period and the most severe impact is death.

Increasing the confirmed positive status in Indonesia requires comprehensive treatment to prevent and control the pandemic. Community nurses as one of the front lines in society play a role in managing public health during this pandemic.

One strategy for providing nursing care by community nurses during the COVID-19 pandemic is virtual care using technology[3]. Ye reported that the use of telehealth during this pandemic was a force of support in the prevention and management of the COVID-19 pandemic[4]. The results of a systematic review from previous research stated that telenursing using features on mobile phones reported effective results in treating patients with TB[5]. Zhong's study reported a significant change in results in people's knowledge, attitudes, and behavior about COVID-19 after the information of the WeChat group[6].

Prevention and management of COVID-19 in Indonesia is very important, especially for the elderly. The elderly are a population at risk associated with COVID-19. Preventive behavior related to COVID-19 is strongly influenced by people's knowledge, attitudes, and behavior about COVID-19. The purpose of this study was to identify the knowledge, attitudes, and behavior of the elderly regarding the prevention and management of COVID-19 after tele-nursing.

METHODS

A descriptive study was used in this study. One hundred one elderly were enrolled in this study using convenience sampling from 26 sub-districts in West Java. Sample selection was taken from sub-districts who filled out online questionnaires and were contacted again to determine whether were willing to be given tele-nursing interventions. The instruments consisted of demographic data and KAP (knowledge, attitude, and practice). Demographic data comprised: age, gender, marital status, education, occupation, and place of current residence. KAP towards COVID-19 was measured using a modified questionnaire from a previous study with 0.71 of Cronbach's alpha coefficient[6]. There were 12 items for knowledge with true, false, and I don't know as response formats. The attitude was measured with two items: agree, disagree, and I don't know. The COVID-19 practices originally included two statements and eight more items were added to have a comprehensive practice towards COVID-19. The elderly were asked to choose between yes or no. Data were collected using an online survey and the elderly were asked to fill in all of the measurements or instruments based on interviews. Data were analyzed using descriptive analysis.

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RESULT

Table 1. Frequency and Percentage of Demographic Data of elderly
in 26 sub-district West Java (N=101)

Variable	Options	Frequency	Percentage
Age	60 – 69 years old	65	63,3
Mean= 67,28 years	70 - 79 years old	24	23,8
	>79 years old	12	11,9
SD = 9,5			
Gender	Male	33	32,7
	Female	67	68,3
Status	Married	65	64,4
	Widow	36	35,6
Education	No school	6	5,9
	Elementary school	59	58,4
	Junior high school	11	10,9
	Senior high school	11	10,9
	University	14	13,9

Screening of signs of COVID-19

Table 2. Frequency and Percentage of Covid-19 signs screening of elderly
in 26 sub-district West Java (N=101)

Signs	Options	Frequency	Percentage
Cough	Yes	2	2
	No	99	98
Fever	Yes	1	1
	No	100	99
Difficulty of breathing	Yes	0	0
	No	101	100
Muscle aches	Yes	15	15
	No	86	85

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KAP of COVID-19 among Elderly after Tele-Nursing in 26 sub-district West Java (N=101)

Table 3. Frequency and Percentage of elderly Knowledge of COVID-19 after Tele-Nursing
in West Java (N = 101)

Statements	Options	Frequency	Percentage
The main clinical symptoms of COVID-19 are fever, fatigue, dry cough, and myalgia.	True	97	96
	False	2	2
	I don't know	2	2
Unlike the common cold, stuffy nose, runny nose, and sneezing are less common in persons infected with the COVID-19 virus.	True	66	65
	False	20	20
	I don't know	15	15
There currently is no effective cure for COVID-19, but early symptomatic and supportive treatment can help most patients recover from infection.	True	87	86
	False	14	14
	I don't know	0	0
Not all people with COVID 2019 will develop severe cases. Only those who are elderly, have chronic illness, and are obese are more likely to be severe cases.	True	95	94
	False	5	5
	I don't know	1	1
Eating or contacting wild animals would result in infection by the COVID-19 virus.	True	50	50
	False	32	32
	I don't know	12	18
The person with COVID-2019 cannot infect the virus to others when a fever is not present	True	25	25
	False	65	64
	I don't know	11	11
The COVID-19 virus spreads via respiratory droplets of infected individuals.	True	99	98
	False	1	1
	I don't know	1	1
The elderly can wear general medical masks to prevent infection by the COVID-19 virus.	True	88	87
	False	10	10
	I don't know	3	3
Isolation and treatment of people infected with the COVID-19 virus is an effective way to reduce the spread of the virus.	True	101	100
	False	0	0
	I don't know	0	0
There is no need for the elderly to take measures to prevent infection by the COVID-19 virus.	True	12	12
	False	86	85
	I don't know	3	3
To prevent infection by COVID-19, the elderly should avoid going to crowded places such as markets and taking public transportation	True	100	99
	False	1	1
	I don't know	0	0
People who have contact with someone infected with COVID-19 should be immediately isolated in proper care. In general, the observation period is 14 days.	True	99	98
	False	0	0.
	I don't know	2	2

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The results of representative knowledge of respondents are good; only 32% of respondents do not know about the COVID-19 transmission through wild animals, and 25% when there is no fever. This can be seen from statements number 5 and number 6 as basic questions about the transmission of COVID-19.

Table 4 Frequency and Percentage of Elderly Practice Towards COVID-19 after Tele-Nursing in 26 sub-district West Java (N = 101)

Questions	Options	Frequency	Percentage
In recent days, have you gone to any crowded place?	Yes	33	33
	No	68	67
In recent days, have you worn a mask when leaving home?	Yes	9	9
	No	92	91
Do you wash your hands with soap before and after eating a meal?	Yes	96	95
	No	5	5
Do you wash your hands with soap after going to the bathroom?	Yes	33	33
	No	68	67
Do you wash your hands with soap after coughing/ sneezing/ picking your nose?	Yes	83	82
	No	18	18
Do you wash your hands with soap after visiting a public area including public transportation, market, and worship place?	Yes	93	92
	No	8	8
Do you wash your hands with soap after touching surfaces outside the home, including money?	Yes	33	33
	No	68	67
Do you wash your hands with soap before, during, and after treating a sick person?	Yes	103	90.35
	No	11	9.65
Do you avoid touching your face?	Yes	67	66
	No	34	34
Do you keep your distance from others with a distance of 1 m?	Yes	89	88
	No	12	12

The representation of the respondent's behavior after telenursing was that nine respondents did not use masks, 33 respondents still went to crowded places, 33 respondent did not wash their hands after handling objects, and 34 respondents did not avoid touching the face area.

DISCUSSION

The current study age was mostly the early elderly. This age group is vulnerable to COVID-19. However, the number of people aged over 60 was 8.55 times greater than those younger than 60 years of developing serious critical disease if infected with the virus[7]. A systematic review showed that fever (91.3%), cough (67.7%), fatigue (51.0%), and dyspnea (30.4%) as the most frequent clinical symptom of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)[8]. The current gold standard for diagnosis of COVID-19 is real-time reverse transcription-polymerase chain reaction (RT-PCR)[9]. The rapid test has been used widely although it is inadequate for the diagnosis of COVID-19 [10.] COVID-19 confirmed cases might differ for each country. Different from other studies, 63.8% of confirmed cases are in the productive age in Hong Kong at age 15-44 years[11]. A screening program will have a high probability of detecting an infected person and it is determined by the incubation time, subclinical case percentage, temperature sensitivity, cases aware of the high

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exposure risk, and the case honesty of self-report on a screening survey[12]. In addition, persons from each age group with underlying diseases such as hypertension, diabetes, cardiovascular disease, and respiratory system disease are at increased risk of severe illness from COVID-19. Male gender was seen as a weak risk factor for COVID-19[13]. There is no evidence of other demographic data increasing the risk of becoming infected with COVID-19. The readiness to follow COVID-19 health protocol will be influenced by KAP. The information about this disease has been widely reported. Overall, participants in the survey had good common knowledge of the disease. The average of score was lower than that reported but slightly more significant than US residents (80%)[14]. There were 17.9% estimated asymptomatic cases of 3,711 people who underwent two weeks of quarantine in a cruise ship in Yokohama, Japan[15].

The respondent had complete knowledge about the prevention of COVID-19 by avoiding going to crowded places, isolation and treatment are vital for minimizing of the virus growing, and isolation in a proper care for those who have contact with an infected COVID-19. This knowledge is facilitated by campaign of staying home in every media social platform and large-scale social interaction to contain the infection in Indonesia. The lowest score of COVID-19 knowledge was that the cause of this disease was initially associated with eating or contacting wild animals at 49.12%. It is explained that the SARS-like coronavirus host was initially associated with wild animals. However, there is no clear evidence of the natural host for COVID-19[16]. More than 90% of respondents stated that fever and cough were correctly stated as clinical signs of COVID-19. This present study has a higher score than the previous study, which stated that only 77% of respondents stated fever and cough as clinical signs of this disease. Respondents had a good attitude toward the success of COVID-19 control at 91.23%. A similar number was found among the parents with a great attitude toward helping the children in the crowd[17]. Practice to minimize

COVID-19 in the present study was good. Only 35.96% of respondents went to crowded places as a less favorable practice. This current study had a lower number than the previous study as 80% did self-isolate or constantly physically distancing[18]. Society needs updated information on COVID-19 to have good knowledge, attitude, and practice. The latest report of the pandemic, symptoms of the disease, and its outbreak were the most needed information[19].

Respondents' knowledge, attitudes, and behavior illustrate the government's stay-at-home campaign and telenursing related to the prevention of COVID-19 in the elderly. Some respondents still have not carried out maximum prevention due to situations and conditions such as the economy, signals, and ownership of smartphones. This is the same as other studies that say that telehealth is one of the interventions that can reach the community for early detection of signs and symptoms of COVID 19[20], and this research proves that in the elderly population. According to previous research, the elderly are satisfied with telemedicine services during the COVID-19 pandemic, although the supporting evidence is limited [21].

CONCLUSION

The results of tele nursing increase knowledge about the prevention and transmission of COVID-19 in elderly in community. Telehealth can reach the knowledge, attitudes and practices of the elderly about COVID-19. Telehealth can be used by nurses to provide nursing care online apart from face-to-face home visits.

CONFLICT OF INTEREST

No conflict of interest

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