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## Research Article

# The Effect of Father's Education on Increasing Knowledge, Attitudes, and Practice of Health Protocols in Preventing COVID-19 in Nursing Students

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### Abstract

**Aims :** This study aims to determine the effect of father's education on increasing knowledge, attitudes, the practice of health protocols in preventing COVID-19 in nursing students.

**Design :** This study is a quantitative study using the pre-experimental with one-group pretest-posttest design

**Methods :** The data was collected through questionnaire which distributed on Google Form to the 166 respondents. The intervention is to provide health education to respondents via the internet: Windows 365 (Teams) about information and ways to prevent COVID-19, as well as simulations on how to wash hands, physical distancing, and dispose of masks which are carried out in 2 sessions in 1 week.

**Results :** The results showed that the number of fathers of nursing students with low education was 134 (80.7%), while the fathers of nursing students with higher education were 32 (19.3%). Meanwhile, the statistical test results obtained a p-value of 0.000 which indicates that there is a significant difference between knowledge about COVID-19, health protocol attitudes, and respondents with low father education and high father education before and after the intervention.

**Conclusions :** There was increase in knowledge, attitude and practice of health protocol for nursing students in average after they got education. COVID-19 is very important for nursing students to learn about in order to improve their knowledge, attitudes, and practice of health protocols so that COVID-19 does not happen.

### Keywords

**Attitude; COVID-19; student's father education; nursing student**

## INTRODUCTION

The case of Coronavirus Disease 2019 (COVID-19) started in the Wuhan area, Hubei province China reporting the first case of pneumonia with no known cause. Meanwhile, in December 2019, it was reported that COVID-19 was an endemic disease worldwide, caused by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-COV2)

virus (1). Common clinical symptoms were difficulty breathing, fever and cough, but may also be accompanied by diarrhea, severe shortness of breath, myalgia, fatigue and other respiratory symptoms (2). Confirmed and suspected cases of COVID-19 reported in China in March 2, 2020 were 8.0174 cases and 2.915 cases of death (3). In Indonesia from 30 December 2019 to 13 April 2020 there were 4.557 confirmed cases

of COVID-19 with 399 deaths. Meanwhile, in Banten province had 285 confirmed cases of COVID-19 and 22 death cases (4).

The impact of COVID-19 on the global economy, according to the International Monetary Fund (IMF) projects that losses could reach 12 trillion US dollars (5). The United States economy in the third quarter of 2020 was projected to be 4.3% and in 2021 it would be 3.9% and the unemployment rate since July-September 2020 was 7.9%. While the economic growth in the third quarter of 2020 in Indonesia was still contracting by 3.49% and the tourism sector had decreased by 86%, foreign tourist arrivals only amounted to 475,000 visits (6).

Knowledge about COVID-19 could prevent transmission of COVID-19. Research in the Republic of Congo said that health workers must have knowledge about COVID-19 disease, it was all about the symptoms, diagnosis, treatment, and prevention strategies for combating COVID-19. The results of the study stated that 92.2% of health workers had sufficient knowledge about it and their sources of information were 39.9% from radio and 30.2% from television (7).

Education about COVID-19 increases public knowledge about COVID-19, as a result it was also increasing optimistic attitude in carrying out COVID-19 prevention practices (8). Knowledge is a prerequisite for the formation of positive attitudes that can influence coping strategies to overcome disease (9).

Things that can be done to prevent COVID-19 are avoiding contact with

people who are confirmed COVID-19, maintaining cleanliness and the environment (10). Ways to protect yourself and others from COVID-19 are carrying out health protocols such as: avoiding contact with COVID-19 sufferers, washing hands with soap or hand sanitizer, always keeping distance, wearing a mask when you leave the house, covering your mouth and nose with a paper towel or your elbow when you sneeze and cough, cleaning and disinfecting frequently touched tools/furniture every day (11). Research in Uganda on health workers obtained data that 74% of health workers carried out good COVID-19 prevention practices such as; keep distance, wearing a mask, do not shake a hand, wash hands before and after handling patients (12).

Fathers are the first educators in teaching children about clean and healthy living habits at home. Fathers become role models, teachers who always remind the children to maintain a healthy lifestyle, if fathers adopt healthy life, then children will also imitate the habits of their fathers. During the pandemic, fathers familiarize their children by washing their hands and feet with soap, using a mask when leaving the house, brushing their teeth twice a day, keeping the environment clean, then those things will become a habit for children (13).

Education is a community management effort to improve health status, therefore good education can increase understanding of the application of healthy and clean behavior in the family (14). Therefore, the level of education of fathers is very influential in educating children to implement healthy living/health protocol practices during the pandemic.

From the description of the data above, researcher was interested in providing education about COVID-19 for nursing students, so they are not only able to avoid the transmission of COVID-19, but also as a role model in the environment and the community to prevent COVID-19. This study aims to determine the effect of father's education on increasing knowledge, attitudes, the practice of health protocols in preventing COVID-19 in nursing students.

## METHODS

### Types of research

The type of research was pre-experimental with 2 measurements before and after the intervention. The intervention is to provide health education to respondents via the internet: Windows 365 (Teams) about information and ways to prevent COVID-19, as well as simulations on how to wash hands, physical distancing, and dispose of masks which are carried out in 2 sessions in 1 week.

### Location and Time of Research

The research was carried out at AKPER Yatna Yuana Lebak in November-December 2020.

### Population and Sample

The sample in this study was 166 people with a total sampling technique that met the inclusion criteria, namely active nursing students, who can communicate well and have access to android gadgets. While the exclusion criteria were students who were not willing to be respondents and were unable to attend due to illness.

### Data collection

The research data was collected using a questionnaire that had been tested for

validity and reliability by the researcher herself with a Cronbach Alpha value of 0.847 and  $r$  table = 0.273 stating the results of *validity* and reliability. The questionnaires were filled out by the respondents themselves which were distributed via Google Form before and after the intervention. The knowledge variable was measured by using a scoring technique, the researcher got an average knowledge value score from 11 questions that were answered by the respondents where value 1 for a true answer and value 0 for a false answer. The attitude variable was measured using 7 questions answered by respondents that made into average attitude score by using value criteria: value 4 for strongly agree, value 3 for agree, value 2 for disagreeing and value 1 for strongly disagree. The health protocol practice variable was measured using 11 questions, the average health protocol practice value score was taken with score criteria: value 3 for always, value 2 for sometimes and value 1 for never. Meanwhile, father's education variable is categorized into two namely a high education and low education, a high score for college graduate and low score for senior high school graduate and below.

### Processing and data analysis

The research analysis that was used in this research was univariate to see the description of the distribution of the respondents' father education, while the Pair T. Test was used bivariate to see the effect of education on increasing knowledge, attitudes, practice of health protocols based on student's father education before and after the intervention.

## RESULTS

**Table 1.**  
**Distribution of Education Level of Nursing Students' Fathers**

Father's Education	Frequency	Percentage
Low	134	80.7
High	32	19.3
Total	166	100

Table 1 shows that the number of nursing students' fathers with low-level education is 134 (80.7%), while the students' fathers with high-level education is 32 (19.3%).

**Table 2.**  
**Distribution Based on Average Value of Knowledge, Attitude, Practice of Health Protocols of Nursing Students in Preventing COVID-19 Based on *Father's Education***

Variable	Father's Education	Mean Pre-Test	Mean Post-Test	Enhancement %	p-value
1. Knowledge	Low	8.022	8.642	7.72	0.000
	High	8.656	8.531	-1.44	0.000
2. Attitude	Low	24.761	25.366	2.44	0.000
	High	24.406	24.813	1.66	0.000
3. Health Protocol Practice	Low	27.231	27.604	1.36	0.000
	High	27.031	27.594	2.08	0.000

In table 2, the average value of knowledge about COVID-19 before intervention on respondents who had low education father was 8.022 and respondents who had high education father was 8.656. After the intervention average value result of knowledge about COVID-19 in respondents who had low education father was 8.642 and the respondent who had high education father was 8.531. From the statistical test was gotten the result of p-value was 0.000 which meant there was a significant difference in COVID-19 knowledge between respondent's father with low education and the higher ones before and after the intervention.

## DISCUSSION

This study stated that there was a relationship between father's education and respondent's knowledge about COVID-19. The role of fathers with high education (75.8%) in supporting education about COVID-19 prevention the knowledge and experience about prevention resources against COVID-19 (15). College graduate fathers (77.5%) showed higher aspects of improving children's brain abilities and optimizing children's potential compared to non-college graduate fathers (16).

The attitude variable for a respondent who had low education father before the intervention had an

average value 24.761, and for a respondent who had high education, the father was 24.406. Meanwhile, after the intervention, respondents who had low education fathers an average score was 25.366, and respondents who had high education father were 24.813. From the statistical test results, the p-value was 0.000, which meant there was a significant difference in attitude variable between respondents who had low education fathers and high education ones before and after the intervention.

Research on health students stated that there was a significant difference in attitude between before and after intervention in preventing COVID-19 with value 0.017(17). Knowledge is a prerequisite for the formation of positive attitudes that can influence coping strategies to overcome disease. A survey in China to health workers stated that good knowledge of COVID-19 affected the attitudes of health workers directly, where it increased confidence in overcoming COVID-19 (9).

In this study, the average value of health protocol practice on respondents who had low education father was 27.231 and the respondents who had high education father was 27.031. Meanwhile, respondents who had low education father after the intervention the average score was 27.604, and respondents who had high education father was 27.594. Based on statistical tests, the results of the p-value 0.000 indicate that there was a significant difference in the variation of health protocol practice between respondents who had low education fathers and high education one before and after the intervention. Research in China also stated there was a relationship between

education level and behavior to prevent COVID-19 with value 0.001 and the higher level of education affected knowledge and behavior to prevent COVID-19 (8).

Fathers who are highly educated, low in education and have no education at all will be different in socializing and practicing COVID-19 prevention behavior to their children. Fathers who are highly educated must have knowledge, experience and broader views in addressing every issue because they consider education very important and have considerable influence on their children. But it is possible for fathers who have low education, depending on *each father, whether they* consider education important or not for the survival of their children. In this COVID-19 pandemic, fathers want their families to be in good health, so fathers remind all family members to practice health protocols and maintain personal hygiene. Another effort that fathers can take to prevent the transmission of COVID-19 is to set an *example, such as always wearing mask when* leaving the house, washing hands and keeping distance (18).

## CONCLUSION

Providing education about COVID-19 is very important to increase the knowledge, attitudes and practice of health protocols for nursing students to prevent COVID-19. The education provided is not only limited come from campuses/schools, but also the education delivered by fathers at home plays an important role in increasing knowledge, forming attitudes and practices in preventing COVID-19 during the pandemic.

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