



The Effect of Health Education about COVID-19 Through Social Media on COVID-19 Prevention Behavior

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ABSTRACT

The Coronavirus Disease 2019 (COVID-19) has now spread and it is recorded that 213 countries have contracted COVID-19 with thousands of new cases appearing every day. COVID-19 is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) which is a coronavirus that has never been previously identified in humans. The research objective was to identify the effect of health education about COVID-19 through social media on COVID-19 prevention behavior. The research hypothesis is that health education about COVID-19 through social media affects changing COVID-19 prevention behavior among students of Health Sciences College of Bina Usada Bali. This research used a pre-experimental method with one group pretest-posttest design. The research population was all nursing students in the second semester of Health Sciences College of Bina Usada Bali, with as many as 89 students. In taking the sampling used the total sampling technique. The data analysis technique used was the Wilcoxon test. The results after being given health education about COVID-19 showed that there was an effect of COVID-19 prevention behavior with a p-value of 0.001. Given the importance of public knowledge regarding COVID-19 prevention behavior so that the role of social media can be used as an educational medium to changing COVID-19 prevention behavior so that people avoid COVID-19.

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ABSTRAK

Coronavirus Disease 2019 (COVID-19) saat ini telah menyebar dan tercatat 213 negara telah tertular COVID-19 dengan ribuan kasus baru yang muncul setiap harinya. COVID-19 merupakan penyakit menular yang disebabkan oleh *Severe Acute Respiratory Syndrome Coronavirus 2* (SARS-CoV-2) yang merupakan coronavirus yang belum pernah diidentifikasi sebelumnya pada manusia. Tujuan penelitian ini adalah untuk mengidentifikasi pengaruh edukasi kesehatan tentang COVID-19 melalui media sosial terhadap perilaku pencegahan COVID-19. Hipotesis penelitian yaitu edukasi kesehatan tentang COVID-19 melalui media sosial berpengaruh mengubah perilaku pencegahan COVID-19 di kalangan Mahasiswa STIKES Bina Usada Bali. Penelitian ini menggunakan metode *pre experimental* dengan *one group pretest - posttest design*. Populasi penelitian adalah seluruh mahasiswa keperawatan semester II STIKES Bina Usada Bali yaitu sebanyak 89 Mahasiswa. Pengambilan sampel menggunakan teknik *total sampling*. Teknik analisa data yang digunakan adalah uji Wilcoxon. Hasil setelah diberikan Edukasi kesehatan tentang COVID-19 menunjukkan ada pengaruh perilaku pencegahan COVID-19 dengan nilai p-value 0,001. Mengingat pentingnya pengetahuan masyarakat terkait perilaku pencegahan COVID-19 sehingga peran media sosial dapat dimanfaatkan sebagai salah satu media edukasi dalam

mengubah perilaku pencegahan COVID-19 sehingga masyarakat terhindar dari COVID-19

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INTRODUCTION

The *coronavirus disease 2019* (COVID-19) pandemic was declared a public health emergency by the World Health Organization (WHO) in January 2020 (Khalaf et al., 2020). A new viral disease called coronavirus disease 2019 (COVID-19) is currently spreading around the world at an alarming rate and as of March 2020 it was recorded that 213 countries had contracted COVID-19 with thousands of new cases emerging every day (Putri, Andini Permana Kartika & Setiawan, 2020). The *coronavirus disease 2019* (COVID-19) is an infectious disease caused by *Severe Acute Respiratory Syndrome Coronavirus 2* (SARS-CoV-2) which is a new type of coronavirus that has never been previously identified in humans. This COVID-19 virus can move quickly and spread from human to human through direct contact (Fadli et al., 2020). COVID-19 causes symptoms ranging from mild to severe and even causes complications of other diseases such as ARDS (*Acute Respiratory Death Syndrome*), Acute cardiac injury, secondary infection, lung infection (pneumonia), *Middle-East Respiratory Syndrome* (MERS), and *Severe Acute Respiratory Syndrome* (SARS) and even death from mild to severe respiratory disorders (Santoso et al., 2020).

SARS-CoV-2 to date has infected a lot because of the ability to spread infection very quickly, due to the very high affinity of this virus on ACE2 (Lu & Sun, 2020). SARS-CoV-2 can be spread by direct or indirect contact. The Center for disease control and prevention reported that as of June 8th, 2021, there had been 173,331,478 positive cases of COVID in the world with a death toll of around 4.64%. The situation of the spread of COVID-19 which has almost reached all provinces in Indonesia with the number of cases and the number of deaths increasing (Dinas Kesehatan Provinsi Bali, 2021).

The number of COVID-19 cases in Indonesia as of June 8th, 2021, was 1,863,031 cases with a death rate of 3.59% (World Health Organization (WHO), 2021). The province of Bali as a tourism area also has a tendency to increase COVID-19 cases every day. The number of COVID-19 cases in the province of Bali until June 8th, 2021 was 44,236 cases with 2.97% deaths (Provinsi Bali, 2021). When viewed based on the highest data, Badung district ranks second after Denpasar city with the highest number of COVID-19 sufferers in Bali. Badung Regency noted that up to July 21st, 2021, there were 11,942 cases with a recovery rate of 10,222 and 303 deaths. Apart from being the district with the highest number of COVID-19 sufferers, Badung is an area that is famous for tourism, so the possibility of COVID-19 transmission will be very large. It is considering the number of visits to Badung district by tourists (Pemerintah Republik Indonesia, 2020).

The increasing number of COVID-19 cases and the COVID-19 pandemic which has been designated by WHO as a public health emergency has a negative impact on mental health at different levels (Khalaf et al., 2020). The impact is anxiety, fear, powerlessness, and stigma on individuals, families and communities. Such an emergency threatens health and safety which creates unsafe and unpredictable conditions in society (Putri, Andini Permana Kartika &

Setiawan, 2020). The World Health Organization (WHO) has stated that important steps in controlling infectious diseases such as COVID-19 include: education, isolation, preventive measures, prevention, control of transmission, and treatment of infected people (Lotfi et al., 2020).

Various efforts have been made by the Indonesian government to provide education to increase knowledge to the public. Education through social media as a communication medium is the first step to make the public aware that COVID-19 can be suppressed by changing behavior to comply with health protocols. Based on information from (Keputusan Menteri Kesehatan Republik Indonesia, 2020), this health protocol includes efforts to prevent and control COVID-19 in public places and facilities by taking into account aspects of individual health protection and critical points in public health protection, involving managers, organizers, or the person in charge of public places and facilities as well as the user community. The Indonesian government has responded to the COVID-19 pandemic with various preventive measures by implementing Health protocols such as: prohibition of traveling to public places (social distancing), recommendations for wearing masks, regularly washing hands with soap or hand sanitizer containing alcohol, covering mouth and nose with tissue, when coughing or sneezing, increase endurance and avoid stress (Pemerintah Republik Indonesia, 2020)

Knowledge or cognitive is a very important domain for the formation of behavior. Knowledge is the result of information captured through sensing a certain object, when someone gets information, the information is analyzed for further processing and placed in accordance with the place, then what is called knowledge appears (Irnawati et al., 2019). Knowledge and motivation of individuals to seek treatment is the desire to maintain their health which greatly influences the factors related to the behavior of sufferers in controlling their disease (Zelika et al., 2018), This is in accordance with research conducted by (Ekarini, 2012) which states that the factors that influence the compliance of hypertensive patients in undergoing hypertension treatment are education, knowledge, and level of motivation.

The objective of Information disseminated through social media is to increase one's knowledge, in this case it aims to increase public knowledge by implementing health protocols in preventing the transmission of COVID -19. Social media has benefits as a multifunctional media, one of which is as a source of public information, which at this time is very supportive of the situation where the COVID-19 pandemic has spread in Indonesia and several other countries. According to Michael Cross in (Aditiawarman, 2019) social media is a term that describes various technologies used to bind people into collaboration, exchange information, and interact through web-based message content. Social media has several benefits, including as a medium of information, communication media, entertainment media and exploring creativity. Some examples of social media include Facebook, Youtube, Whatsapp, Line, Twitter, Instagram and others. Based on the explanation above, the researchers decided to

conduct the research related to “**The Effect of Health Education about COVID-19 Through Social Media on COVID-19 Prevention Behavior among Students in Health Sciences College of Bina Usada Bali**”.

METHOD

Participant characteristics and research design

This research type is quantitative pre-experimental research with one group pretest – posttest design. In this design, one group that has been selected is then measured to determine the initial state and is measured again after being given treatment to determine the final state, is there a difference between the initial state and the final state after being given treatment (Nursalam, 2017) . The population in this study were all nursing students in the first semester of Health Sciences College of Bina Usada Bali, as many as 89 students.

Sampling procedures

The type of sampling used is non-probability sampling with total sampling technique so that the number of samples in this research is the entire population that is used as a sample, namely 89 students of Bachelor of Nursing Study Program in Health Sciences College of Bina Usada Bali.

Sample size, power, and precision

The number of samples in this study is the entire population that is used as a sample, the amounts are 89 students of the Bachelor of Nursing Study Program in Health Sciences College of Bina Usada Bali.

Measures and covariates

The questionnaires were distributed online because at this time the students in Health Sciences College of Bina Usada Bali were online teaching and learning process. Measuring data with a questionnaire to determine whether there is an influence on the use of social media in Health Sciences College of Bina Usada Bali students in collecting information on the behavior of preventing the COVID-19 pandemic and understanding the information. Questionnaire on behavior to identify student behavior regarding COVID-19 prevention using a Likert scale model with a questionnaire sheet containing 12 questions. To get results in the behavioral assessment category, in this case, it is divided into 3 parts, namely good 76-100%, good enough 56-75% and less good <56%.

The educational variables are online leaflets made by the researchers themselves and videos containing information about COVID-19, namely understanding, signs and symptoms, modes of transmission, methods of preventing and handling COVID-19. Education is given to respondents through social media (whatsapp, intagram, line, facebook). Education was conducted twice a week for four weeks. While providing education with leaflets or videos, respondents are welcome to ask researchers through social media. This research has received a recommendation from the Ethics Clearance Team in Health Sciences College of Bina Usada Bali based on Decree No. 124/EA/KEPK-BUB-2022, declared ethically fit according to seven standards of WHO 2011.

Data analysis

Data analysis was divided into univariate analysis and bivariate analysis. The data analysis technique used a non-parametric statistical test, namely the Wilcoxon test. The research hypothesis can be proven by the asymp value. Sig. (2-tailed), if the value of asymp. Sig. (2-tailed) <0.05 then the research hypothesis is accepted, but if it is asymp. Sig. (2-tailed) > 0.05 then the research hypothesis is rejected (Jiwantoro, 2017).

RESULTS AND DISCUSSION

1. Research Variables

Table 1
COVID-19 Prevention Behavior of Second Semester of the Students in Health Sciences College of Bina Usada Bali on August 2022

No	COVID-19 Prevention Behavior	Mean	Std. Deviasi	n
1	Pre Test	99.69	13,45	89
2	Post Test	107,18	12,79	89

Source : Primary Data 2022

The table above shows the COVID -19 prevention behavior of students in Health Sciences College of Bina Usada Bali, it can be seen that there is an increase in prevention behavior before (pre test) 99.96 and after (post test) 107.18. According to (Notoatmodjo, 2014) information sources are everything that becomes an intermediary in conveying information, information media for mass communication. Sources of information can be obtained through print media (newspapers, magazines), electronic media (television, radio, internet), and through the activities of health care workers such as training held. information sources can have an influence on knowledge and behavior where a person will receive a cognitive foundation to form knowledge, the more sources of information, the more knowledge is obtained. High educational background is directly proportional to one's knowledge. The higher the education, the higher the level of one's knowledge. Knowledge possessed, a person will be able to influence behavior. This knowledge itself is usually obtained from information obtained and experiences that have been passed by individuals (Yosef, 2013).

One of strategy for changing human knowledge is education, which is a method used by providing stimulation about information containing material to someone in the hope that the person's knowledge can increase which will affect the person's attitude, which will ultimately change behavior. that person (Putranto et al., 2021). (Cangara, 2017) adds that health-related information sources are recognized as a key determinant of health. Health information can be obtained through various means such as counseling, health education and training, mass media, electronic media, and others. Sources of information from health workers can increase public knowledge, both in terms of health education, discussions and watching videos related to the implementation of health protocols.

Health behavior is influenced by many factors, including knowledge, perception, emotion, motivation, and environment (Octa, 2019). Exploration of public health behavior can be seen from various components, including

perceptions of disease susceptibility, perceptions of obstacles in prevention efforts, perceptions of benefits, encouragement, and individual perceptions of their abilities to carry out prevention efforts (Mujiburrahman et al., 2020). Providing education to families is an activity to convey health messages to individuals and families in the hope of changing behavior for the better (Hawari, 2011).

This research shows that most of the respondents' preventive behavior is in the good category. The forms of behavior shown include obedience in maintaining distance when outside the house, always washing hands with soap or hand sanitizer before entering the house, shops/minimarkets, ATMs and other facilities, obeying the use of masks when traveling and not touching or shaking hands with other people. Someone who already knows about certain information, then he will be able to determine and make decisions on how he should deal with it. In other words, when someone has information about COVID-19, they will be able to determine how they should behave towards COVID-19 (Ahmadi, 2013)

2. Bivariate Analysis

Table 2
The Effect of Health Education about COVID-19 Through Social Media on COVID-19 Prevention Behavior among the Students in Health Sciences College of Bina Usada Bali

Group	N	Mean	P-Value	Z
Pre Test	89	99,69	0,001	-3,375
Post Test	89	107,18		

Source : Primary Data 2022

Relating to the table above shows the results after being given health education about COVID-19 to 89 respondents from the second semester in Health Sciences College of Bina Usada Bali showing that there was an effect of COVID-19 prevention behavior after being given Health Education about COVID-19, as seen from the results that there was a change in the behavior of preventing COVID-19 before (pre test) and after (post test) with a p-value of 0.001.

This research is in line with (Uly et al., 2021) concerning the relationship between knowledge and attitudes with students at SMAN 7 Luwu Timur preventing Covid-19, stating that the results of the study showed that there was a relationship between knowledge and preventive measures for Covid-19 ($p = .003$) and a relationship between attitudes with covid-19 precautions ($p = .019$). This research is also in line with (Tegu et al., 2022) concerning the Relationship of Knowledge and Attitudes to Covid-19 Prevention Behavior in Students of the Faculty of Medicine, University of Nusa Cendana, which states that there is a significant relationship between Knowledge and Attitudes and Preventive Behavior in students of the Faculty of Medicine, University of Nusa Cendana.

Efforts to prevent the transmission of COVID-19 in adolescents require good understanding and knowledge, according to (Widyakusuma putra & Manalu, 2020) that good knowledge can be supported by acceptance of information circulating in the community about COVID-19. Sources of information can have an influence on knowledge where a person will receive a cognitive foundation to form knowledge and then will assess or behave towards the information, the next process is expected to carry out or practice the knowledge gained in carrying out COVID-19 prevention health protocols (Buana, 2020).

Source of information is the availability of information related to the actions that will be taken by someone.

Sufficient information can produce knowledge related to how to prevent a disease, so that individuals can recognize existing problems. This encourages healthy behavior. Sources of information from health care workers can increase public knowledge, both in terms of health education, discussions and watching videos related to the implementation of health protocols. In addition, sources of information from health workers about preventing the transmission of COVID-19 by implementing health protocols can have an influence on knowledge where a person will receive a cognitive foundation to form knowledge and then evaluate or act on the information. The next process is expected to implement or practice the knowledge gained in this regard by implementing the COVID-19 prevention health protocol (Buana, 2020). The more sources of information, the better the information obtained by a person is also supported by the media used which can also influence a person's attitude (Cangara, 2017). Information obtained about the transmission of COVID-19 can affect adolescent knowledge, knowledge is very important in continuing aspects of attitude and behavior because if teenagers have good knowledge about preventing the transmission of COVID-19, it will affect the real actions taken, namely implementing health protocols.

Good knowledge is not necessarily in harmony with good behavior but bad behavior. Knowledge is good but behavior is not good because before entering the behavioral stage, one must have an attitude first, in accordance with (Yoga Purandina & Astra Winaya, 2020) attitude consists of several factors that influence it, one of which is the trust factor. If someone does not believe in the existence of the COVID-19 virus, then he will not behave well in preventing COVID-19, causing bad behavior. Meanwhile, poor knowledge but good behavior occurs because of an individual attitude at the level of acceptance, which means that students with poor knowledge can behave well because of the provisions of the school to behave according to the COVID-19 prevention health protocol, this is supported by the level of the attitude that students take is the level.

LIMITATION OF THE STUDY

This research has not fully controlled the source of sample information related to COVID-19 prevention behavior.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the research above, it can be concluded that there is an increase in COVID-19 prevention behavior after being given Health Education about COVID-19 with a p-value of 0.001. The advice that can be given based on the results of this research is the importance of public knowledge regarding COVID-19 prevention behavior so that the role of social media can be used as an educational medium in changing COVID-19 prevention behavior so that people avoid COVID-19.

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ETHICAL CONSIDERATIONS

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Conflict of Interest Statement

The researcher stated that there was no conflict of interest in this research.

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