

IMPROVEMENT FREQUENCY OF INFORMATION ACCESS AND ANXIOUS, IMPACT ON THE HIGH LEVEL OF COMPLIANCE PROTOCOL PREVENTION COVID-19 IN NURSE CANDIDATES

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Abstract

The spread of the COVID-19 virus which has become a pandemic is thought to cause changes in health behavior in nurse candidates. The purpose of this study is to identify changes in health behavior of nursing students in the form of seeking health information and increasing anxious about the possibility of contracting the virus, which is thought to have an impact on increasing compliance with health behavior. This type of research is an online survey with cross-sectional design. Data collected from nursing students in their late teens were statistically analyzed by the correlation test. The results showed that increasing literacy in seeking information about COVID-19 cases from social media and a fairly high increase in anxious had an impact on increasing compliance with preventing the spread of the virus. However, it was found that exposure to case information did not increase anxious in respondents. The conclusion of this study is the need for increased health literacy to create compliance with the COVID-19 virus prevention protocol at the same time as an increase in anxious.

Keywords: Anxiety; Coronavirus; Compliance; Literasi

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1. Introduction

The COVID-19 pandemic caused changes in health behavior in everyone (Kushner Gadarian et al., 2020). The changes that occur include an increase in compliance with measures to prevent the spread of the virus, the impact of information literacy on the development of the number of cases. Another change is an increase in anxiety about the outbreak of the virus (Van Bavel et al., 2020). This makes the aggregate group in their late teens look for the health information they need.

This phenomenon also occurs in the late adolescent aggregate who are currently undergoing nursing education in Indonesia. The aggregate seeks health information related to this Coronavirus case on the internet. The quality of health information on the internet should be of concern to local health organizations (Hernández-García, & Giménez-Júlvez, 2020). Another result of this pandemic is an increase in anxious for them. This can also happen to all nurse candidates in Indonesia.

Perceptions exposed to risk of infection and preventive behavior are dynamic which are affected by time, different demographic characteristics, and geographical location. These factors are likely to influence the effectiveness of disease control

measures (Ibuka et al., 2010). But until now there has not been found any research results that prove this phenomenon. Therefore it is necessary to conduct research that can provide an overview of the level of literacy, anxiety conditions, and compliance with protocols to prevent the spread of such cases.

2. Method

This type of research is an analytic survey with cross-sectional design. Data collection was done online using Google forms that are shared through application groups chatting to several enumerators in various major cities in Indonesia. Informed consent was given at the beginning of the questionnaire display and given the "continue" menu if the respondent was willing to be the subject of research.

The population in this study is the late adolescents who are taking nursing education consisting of diploma, undergraduate, and nursing professions. This sample criterion considers better emotional stability than younger adolescents and the sample's ability to access and understand COVID-19 case information. The number of samples obtained was 218 respondents.

The research variables consisted of the frequency of access to information on the number of

cases of COVID-19, the anxious of respondents, and the act of protocol compliances to prevent the spread of the COVID-19 virus. Each variable is recorded with one question, i.e.: How often you are actively looking for information on changes to the Covid-19 case? How high is your anxiety level, will you possibly get Covid-19? and How often you ignore the protocol of transmission prevention Covid-19 which is instructed by the authorities?

The answers to some of these question was the value of the liner scale with a range of 0-5 for favorable questions and 5-0 for unfavorable questions (variable 3). Data was collected from 5-9 May 2020, which coincided with the incidence of COVID-19 cases with the increasing number of victims in the cities studied. Data were analyzed statistically using the SPSS 21 application.

This research is a survey of the experience and condition of respondents in real without any intervention that can affect changes in the original conditions. This research focuses on the principles of research ethics, so that the confidentiality of respondents' identities is guaranteed and does not result in significant losses.

3. Results and Discussion

Based on table 1. The results of this study found that the average age of respondents was 20.95 years, the majority of respondents were women, most of their education was bachelor, the majority of respondents were located in DI Yogyakarta, and the media accessed to obtain information on COVID-19 cases were social media.

Data on the three main research variables obtained no significant differences based on education level (table 2), but it was found that there were significant differences based on location of educational institutions for the main variable protocol compliance. The difference was found in the data compared to the city of Denpasar, Bali. This happens because the number of respondents in the city is far less than in other cities..

Table 3 illustrates that there was a significant correlation between the frequency of access to cases information and the anxious and the protocol compliance to prevent the spread of the COVID-19 virus. Because it has a *r* count value is close to score 0, so it can be concluded that it has a weak relationship closeness. The direction of the relationship obtained is positive. This means that the higher the value of frequency of access to information and the anxious, the higher the value of the protocol compliance.

But on the contrary, it was found that there was no significant correlation between the frequency of access to information and the anxious. This means that access to information on COVID-19 cases by respondents is possible to aim to increase detention

and health knowledge as part of nurse candidates. The educational characteristics of the respondents did not contribute to differences in behavior in pandemic prevention protocol compliance. This was confirmed by previous researchers who revealed the same results (Masuri et al., 2012). Demikian juga jika dilihat dari tingkat resiko kerentanan masyarakat (Heo et al., 2013).

This proves that the population of nursing students in Indonesia has a fairly good phenomenon of information literacy in the case of COVID-19. Although most of it is still sourced on social media, the second largest source of literacy therapy comes from the official government website (table 1). The more controlled respondent's anxiety value is not caused by the results of information exposure, but is possible due to other factors such as being away from the family during the pandemic and changes in the online learning process, both of which need further investigation. Changes in educational programs that focus on increasing students' knowledge effectively can contribute to changes in their health behaviors (Park et la., 2010; Prati et al., 2010). Cognitive level factors and social support also influence the choice of pandemic prevention measures (Setbon et al., 2011).

Table 1. Data distribution of Sex, Age, Education Level, Location of education institutions & Media Source (n = 218)

Variables	Frequency (n)	Percentage (%)
Sex		
Men	53	24.3
Women	165	75.7
Age (year)	20,95±1,604	
Education Level		
Diploma	8	3.7
Bachelor	167	76.6
Profession	43	19.7
Location of educational institutions		
Denpasar	3	1.4
Yogyakarta	122	56.0
Jakarta	7	3.2
West Java	13	6.0
Central Java	44	20.2
East Java	29	13.3
Media Source		
Group Chat App.	5	2.3
Social Media	112	51.4
Television	33	15.1
Gov. Official Website	68	31.2

Table 2. Data Difference of Variables Based on Education Level and Location of Educational Institutions (n= 218)

Variable	Education Level	Location of Educational Institutions
Freq. of access to Information	0.583	0.692
Anxious	0.680	0.090
Protocol Compliance	0.694	0.036

Description: Kruskal-Wallis Test. Significant if p value <0.05

Table 3. Central Tendency Value and correlation test between Freq. Information Access, Anxious, & Protocol Compliance (n= 218)

Variables	Min-Max	Mean	Std. Deviation
Freq. Information Access	0-5	3.18	1.382
Anxious	0-5	3.00	1.182
Protocol Compliance	0-5	3.52	1.672
Spearman's rho Correlation Test	Freq. Information Access	Anxious	Protocol Compliance
Freq. of access to Information	-	-0.019 (0.775)	0.174 (0.010)
Anxious	-0.019 (0.775)	-	0.148 (0.029)
Protocol Compliance	0.174 (0.010)	0.148 (0.029)	-

Description: r count (p value). Significant if p value <0.05

The existence of the COVID-19 pandemic has made respondents compliant with the government's call for a protocol to prevent the spread of cases. In this study, the average value of respondents' compliance with government protocols is quite high. Precautionary actions taken by even a small group of people, such as groups of nursing students, can determine the possibility of the development of an outbreak (Ekberg et al., 2009).

This indicates that the results of literacy can increase awareness and good retention of respondents. In general there will be an increase in changes in health behaviors such as washing hands, maintaining physical distance, and other health protective behaviors, but not all are practiced (Wise et al., 2020). The results of previous studies found a unique difference in the behavior of epidemic protection between Europeans and Asians. Europeans are more likely to avoid places of entertainment while Asians are more likely to avoid doctors (Sadique et al., 2007). The results of other studies reveal different things, that the level of awareness is not always in harmony with the behavior of adherence to prevent the spread of disease (Balkhy et al., 2010).

Respondents' compliance with the COVID-19 prevention protocol was also caused by the results of the respondents' anxiety conditions. It was the originator of the compulsion of respondent behavior to find information on the development of the case and the appeal of the latest prevention. Anxiety can be reduced by increasing trust in health / nursing organizations that provide recommendations for protective measures against this infectious disease (Gilles et al., 2011). Public tranquility is influenced by information on the severity of outbreak data from local authorities (Bults et al., 2011).

Social media currently has a large role in providing information quickly, compared to information sourced from the official government website. This can be understood, because there is easy access to social media applications compared to other media. Social media also has a more attractive and friendly appearance for student aggregates. The quality of information available on the internet media must be improved by authorized health organizations to be able to promote changes in better health behavior (Hernández-García, & Giménez-Júlvez, 2020). Quality information measures the effectiveness of health risk communication. Strategic planning information from the authorities must fully consider how living conditions, cultural values, and perspectives on behavior that influence risks during a pandemic (Vaughan, & Tinker, 2009).

In addition to access to health information obtained from social media, a simple way of giving self-protective measures in public spaces such as hand washing information and the use of masks can improve health behavior (Updegraff et al., 2011). However, it is necessary to be aware of a decrease in interest in reading among respondents due to the saturation of information provided during the pandemic (Smith et al., 2013). Therefore it is necessary to maintain and increase the motivation of nursing students to protect themselves and to promote health (Sharifirad et al., 2014).

4. Conclusions and suggestions

The impact of the COVID-19 pandemic on nursing students in Indonesia is an increase in literacy awareness to search for information on the number of cases even though most of it was obtained from social media. In addition, an increase in anxiety is quite high. Both of these events, lead to increased

student compliance to prevent the spread of the virus. The unique thing is, exposure to information on the number of cases from most social media does not increase feelings of anxiety in respondents. Therefore, further research is needed related to this. For prospective nurses who will work in an environment at risk of biological hazard contamination, it is necessary to increase the literacy of prevention and treatment protocols of patients with COVID-19.

5. References

- Balkhy, H. H., Abolfotouh, M. A., Al-Hathloul, R. H., & Al-Jumah, M. A. (2010). Awareness, attitudes, and practices related to the swine influenza pandemic among the Saudi public. *BMC infectious diseases*, 10(1), 42.
- Bults, M., Beaujean, D. J., de Zwart, O., Kok, G., van Empelen, P., van Steenberghe, J. E., ... & Voeten, H. A. (2011). Perceived risk, anxiety, and behavioural responses of the general public during the early phase of the Influenza A (H1N1) pandemic in the Netherlands: results of three consecutive online surveys. *BMC public health*, 11(1), 2.
- Ekberg, J., Eriksson, H., Morin, M., Holm, E., Strömberg, M., & Timpka, T. (2009). Impact of precautionary behaviors during outbreaks of pandemic influenza: modeling of regional differences. In *AMIA Annual Symposium Proceedings* (Vol. 2009, p. 163). American Medical Informatics Association.
- Heo, J. Y., Chang, S. H., Go, M. J., Kim, Y. M., Gu, S. H., & Chun, B. C. (2013). Risk perception, preventive behaviors, and vaccination coverage in the Korean Population during the 2009–2010 Pandemic Influenza A (H1N1): comparison between high-risk group and non-high-risk group. *PLoS One*, 8(5).
- Hernández-García, I., & Giménez-Júlvez, T. (2020). Assessment of health information about COVID-19 prevention on the internet: infodemiological study. *JMIR Public Health and Surveillance*, 6(2), e18717.
- Ibuka, Y., Chapman, G. B., Meyers, L. A., Li, M., & Galvani, A. P. (2010). The dynamics of risk perceptions and precautionary behavior in response to 2009 (H1N1) pandemic influenza. *BMC infectious diseases*, 10(1), 296.
- Gilles, I., Bangerter, A., Clémence, A., Green, E. G., Krings, F., Staerklé, C., & Wagner-Egger, P. (2011). Trust in medical organizations predicts pandemic (H1N1) 2009 vaccination behavior and perceived efficacy of protection measures in the Swiss public. *European journal of epidemiology*, 26(3), 203-210.
- Kushner Gadarian, S., Goodman, S. W., & Pepinsky, T. B. (2020). Partisanship, health behavior, and policy attitudes in the early stages of the COVID-19 pandemic. *Health Behavior, and Policy Attitudes in the Early Stages of the COVID-19 Pandemic (March 27, 2020)*. Available at SSRN: <https://ssrn.com/abstract=3562796> or <http://dx.doi.org/10.2139/ssrn.3562796>.
- Masuri, M. G., Isa, K. A. M., Tahir, M. P. M., Hassan, H. F., Hassan, Z., Jamhuri, F. Z., ... & Noor, S. H. (2012). Behaviour response among health sciences students towards H1N1 pandemic. *Procedia-social and behavioral sciences*, 36, 77-86.
- Park, S. M., Lee, J. Y., & Choi, J. S. (2010). Affecting factors on health behavior of university students during pandemic influenza A (H1N1). *The Journal of Korean Academic Society of Nursing Education*, 16(2), 249-256.
- Prati, G., Pietrantonio, L., & Zani, B. (2011). A social-cognitive model of pandemic influenza H1N1 risk perception and recommended behaviors in Italy. *Risk Analysis: An International Journal*, 31(4), 645-656.
- Sadique, M. Z., Edmunds, W. J., Smith, R. D., Meerding, W. J., De Zwart, O., Brug, J., & Beutels, P. (2007). Precautionary behavior in response to perceived threat of pandemic influenza. *Emerging infectious diseases*, 13(9), 1307.
- Setbon, M., Le Pape, M. C., Létroublon, C., Caille-Brillet, A. L., & Raude, J. (2011). The public's preventive strategies in response to the pandemic influenza A/H1N1 in France: distribution and determinants. *Preventive medicine*, 52(2), 178-181.
- Sharifirad, G., Yarmohammadi, P., Sharifabad, M. A. M., & Rahaei, Z. (2014). Determination of preventive behaviors for pandemic influenza A/H1N1 based on protection motivation theory among female high school students in Isfahan, Iran. *Journal of education and health promotion*, 3.
- Smith, K. C., Rimal, R. N., Sandberg, H., Storey, J. D., Lagasse, L., Maulsby, C., ... & Links, J. M. (2013). Understanding newsworthiness of an emerging pandemic: International newspaper coverage of the H1N1 outbreak. *Influenza and other respiratory viruses*, 7(5), 847-853.
- Updegraff, J. A., Emanuel, A. S., Gallagher, K. M., & Steinman, C. T. (2011). Framing flu prevention—An experimental field test of signs promoting hand hygiene during the 2009–2010 H1N1 pandemic. *Health Psychology*, 30(3), 295-299.
- Van Bavel, J. J., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... & Drury, J. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour*, 1-12.

Wise, T., Zbozinek, T. D., Michelini, G., Hagan, C. C., & Mobbs, D. (2020). Changes in risk perception and protective behavior during the first week of the COVID-19 pandemic in the United States. <https://doi.org/10.31234/osf.io/dz428>.

Vaughan, E., & Tinker, T. (2009). Effective health risk communication about pandemic influenza for vulnerable populations. *American Journal of Public Health*, 99(S2), S324-S332.